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The Student Center - The Medical University of South Carolina, Charleston, South Carolina

Alexander Howe
Clemson University

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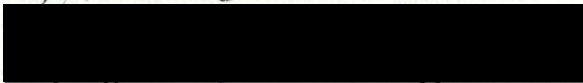
THE STUDENT CENTER
THE MEDICAL UNIVERSITY OF SOUTH CAROLINA
CHARLESTON , SOUTH CAROLINA


ALEXANDER HOWE

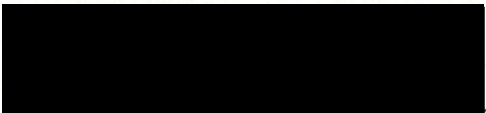
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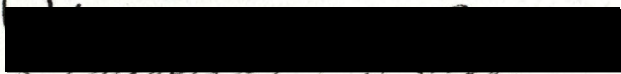
A terminal project submitted to the Faculty of the College of Architecture,
Clemson University in partial fulfillment of the requirements for the
degree of Master of Architecture.



Dean, College of Architecture


Head, Department of Architecture


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Committee Member

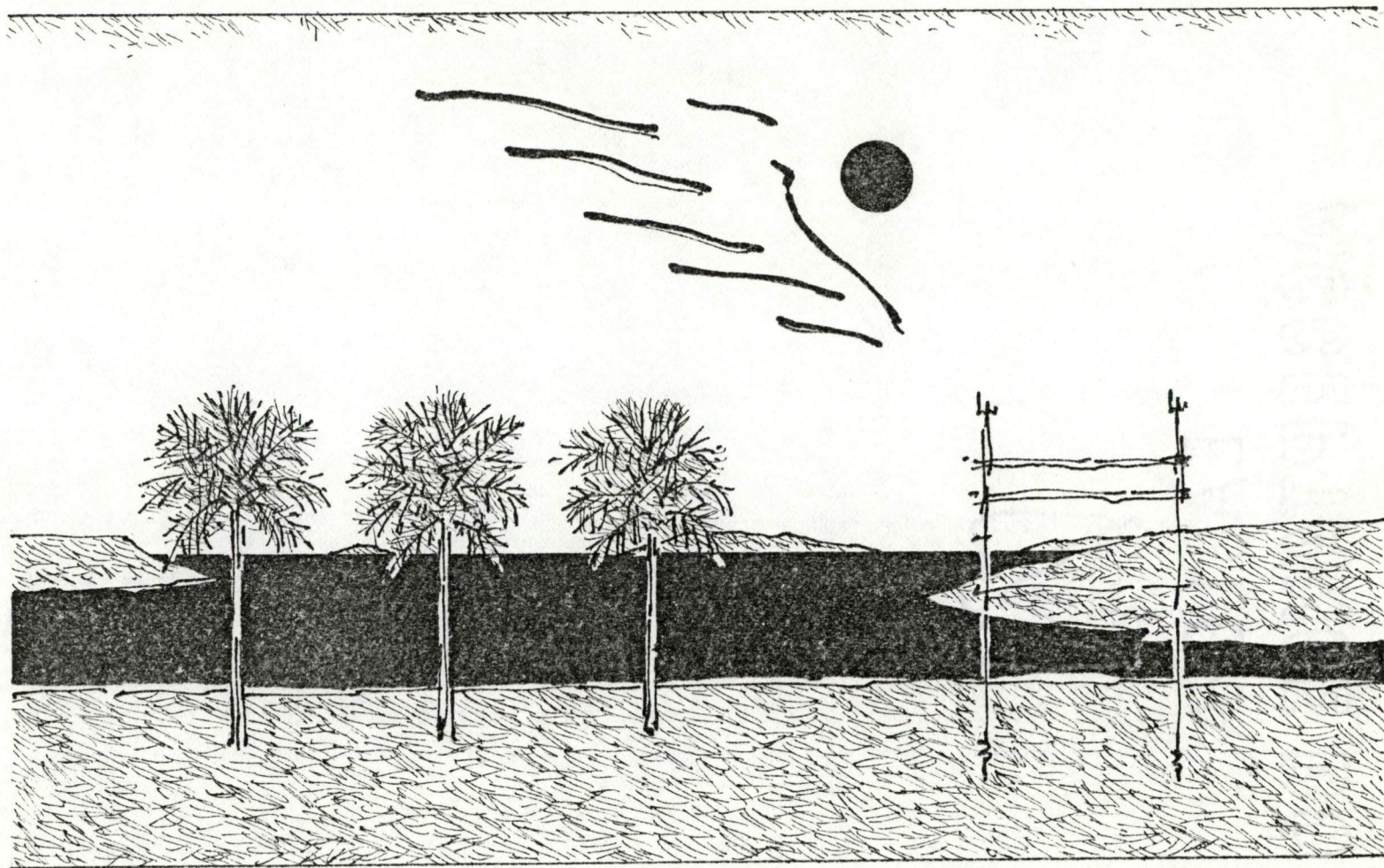

Committee Member


Alexander Howe, December 1980

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To DENNETT FARWELL HOWE and ROSAMOND BROWN HOWE



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HISTORY

HISTORY OF CHARLESTON

Charleston, the "Mother Settlement" of the Province of Carolina, was initially settled in the Spring of 1670, on the shores of the Ashley River, primarily through the advice of the chieftain of the Kiawah Indians. William Sayre, the first governor, saw the site as the finest port for hundreds of miles, and the peninsula as "a town of trade and refuge." The original charter included 600 acres of dry land, of which the focus was Oyster Point, now White Point Gardens. The plan of the city was designated the "Grand Modell", and this plan remains in tact below present day Beaufain Street. The first streets were to be "amply wide", with as great a degree of regularity as could be achieved in the presence of salt marshes and tidal creeks. A grid of land parcels was established, with the outlying lines of property determined by creek edges. North of the Grand Modell, John Coming was granted a plantation extending from Beaufain to Calhoun streets; this plantation was subsequently cut up into small boroughs, each with distinct characteristics and independent circulation patterns, creating many dead-end streets at the boundaries of the boroughs.

This earliest settlement moved eastward to the banks of the Cooper River within the century, developing a commercial corridor along the relatively marsh-free riverbank, quite distinct from the Ashley River side. The commercial strip was backed by the parallel residential areas, this whole being fortified by a three-sided wall whose western limit was at present day Meeting Street. The settlers aggressively pushed their trade with the Indians as far as the Mississippi River, establishing plantations outside the city. Timber and provisions were traded through the sugar islands in the Caribbean, with rice quickly becoming the staple export crop. Connecting freightways were cut through marsh lands from the inland waterway, giving the harbor an unequalled position along the coast as a center of trade. The city and its secure port concomitantly became a place of refuge from an extensive outlying area, and was able to repulse two attacks by the Spanish before 1700. Charleston was also attacked by the French during the War of the Spanish succession, but the fortifications, and the inhabitants, withstood the onslaught.

With the end of the war with the Yemassee Indians, the city and surrounding lands became safe for expansion and Charleston began to grow rapidly.

By 1720 Charleston came under direct British protection to safeguard crown investments, and the western walls were torn down. Landfill operations commenced. In 1730 the Neck Plantation of the Coming family was divided into the boroughs of Rhetttsbury, Ansonborough, Middlesex, Harleston Village the Glebe Lands, and Wraggsborough. Notable architecture of the period is found on the west side of Church Street today. These buildings are simple masonry buildings, stucco-covered houses of two or three stories, Federal in style, however with hipped roofs.

The War of Austrian Succession cut off the European trade markets for rice, and the subsequent shift to indigo signalled the second half of the pre-Revolution Golden Age for the city. Saint Michael's Church was erected in 1752-61, and the Miles Brewton House in 1769, both buildings signifying the fact that Charleston was, per capital, the richest city in the colonies at this time.

Despite attacks on the city during the Revolutionary War, and a fair degree of damage, the city recovered rapidly. Cotton replaced indigo as the major cash crop and rice was moving futher up the rivers on the large plan-

tations. The "Neck", west of Archdale between Cumberland and Pinckney streets, was filled in for the development of the King Street factory yards. The Santee Canal from the Cooper River to Charleston was completed in 1790. The Adam style in architecture predominated during this period, represented by the Gabriel Manigault House, with its light classical decoration, porticos, columns, and arches. The first railway yard was introduced in 1800 and the western creeks and marshes continued to be filled.

In 1812 Charleston became the center of opposition to trade tariffs imposed at the Federal level, and the city lost some of its exporting lead to Savannah when the steamboat appeared on the Savannah River. Prosperity continued nonetheless, and the 1820's became the transitional period in city architecture, working away from the Adam style to the Greek Revival. Robert Mills designed important buildings in the city during this period, including the Fireproof Building of 1822 and the First Baptist Church in the same year. The Classical Revival period overlapped the Greek Revival during this period; the monumental buildings that dominate the city today were constructed, including Market Hall in 1841, modelled after a Roman Temple, the

Hasell Street Synagogue, and Saint Philip's Church in 1835.

The series of cataclysms that began in 1861 with the Great Fire began the long period of isolation and decline in prominence for the city. During the Civil War Charleston underwent 587 days of continuous bombardment, and the city was evacuated below Calhoun Street. The poverty that followed the war, and the enforced trade isolation, preserved what was left of the buildings from change through the absence of reinvestment or rebuilding. The earthquake of 1886 further crippled the city and destroyed more notable buildings, and the city landscape by 1930 was threatened by commercial developers who proposed massive leveling of structures, and by collectors who had begun to remove Charleston buildings to other cities. The Zoning Ordinance of 1931 halted this man-devised destruction and immediately heightened local and national awareness of the unique architectural jewels preserved in the city.

The final filling of the Ashley River marshes occurred in the 1950's to accomodate development of the institutional center of the city, medical and institutional, and since that time the effort to preserve the historical

setting of the peninsula have been highly successful. The 1980's however, signal the rise of moneyed interests that threaten to undo the good of the previous twenty years. A logical and intelligent Master Plan for the city has yet to surface despite valiant attempts to delineate correct guidelines for future development. It is clear that a new city must find its place within the larger context. It is clear where and how this development should take place. However, Charleston suffers from a malaise that filters down from the State level, in terms of the fact that the powerful in the State of South Carolina, the legislators and the wealthiest developers, as well as the powerful at the Federal level, have continued to punish the state for its former wealth and its arrogance in the Civil War. This is seen in the general poisoning of the State, as South Carolina imports the lion's share of toxic chemicals and nuclear wastes from the eastern part of the country, with a disregard for the long-term effects of this poisoning.

PLANNING AND PRESERVATION IN THE CITY OF CHARLESTON

After World War 1, Charleston initiated the now famous efforts to preserve and protect the historic structures within the city boundaries. 1920 heralded the Preservation Society of Charleston as the "Rainbow Row" was threatened with demolition. The City Zoning Ordinance was created in 1931, establishing the first Old and Historic District in the Country. This first preserve covered 144 acres. The early effort sought to establish precedent for the preservation of neighborhoods of similar architectural character, the groupings of residences and larger public buildings that make up the urban fabric unique to Charleston. "Although ecclesiastical architecture alone would make Charleston an important city, this combination of lesser domestic homes and large public buildings and churches on a single street provides an architectural and historical experience that is found in few cities. Vistas, unexpected sight-lines, and panoramic views of the harbor provide additional visual impacts as one travels from place to place.

The limits of the Old and Historic District have been expanded twice since its inception, and the Zoning Ordinance was in 1966 changed to include

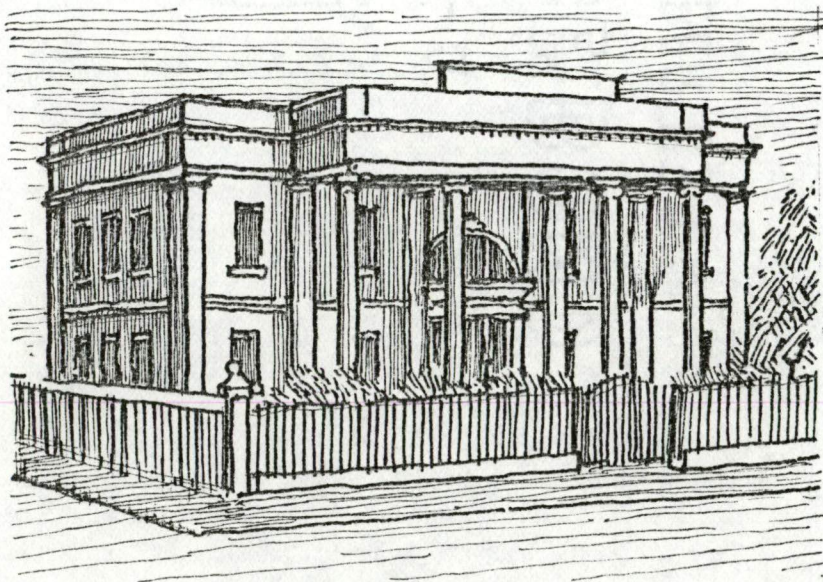
all city buildings over 100 years old. Although private efforts and funding have historically been the impetus behind preservation efforts in Charleston, the City is beginning to contribute funds and staff and time. In 1971 the City conducted a Historic Architectural Inventory for the whole peninsula south of the Crosstown Expressway. The criteria for evaluation was "exceptional, excellent, significant and contributory," and this was followed in 1973 with the Historic Preservation Plan a proposal for the integration of preservation efforts and future development plans.

Logical outgrowths of the Historic Preservation Plan have been comprehensive and site-specific for each of the neighborhood area groups. Implications for the Medical Complex Area, designated as Planning Unit 2, have been predicated upon the general but strong recommendation that the complex limit its expansion to the areas north of Calhoun Street and West of Ashley Avenue. The complex is to signal at its southernmost point an "institutional corridor" which would extend north all the way to the Citadel. This corridor would be cut at the Spring/Cannon Street, East/West corridor by the revitalized commercial use area existing in its present state of mixed new and historic buildings. Passive recreation sites would also integrate into

the institutional corridor along the Ashley River waterfront.

In addition to these site-specific recommendations, the Medical University itself has become involved in the efforts to address the City's long term housing needs as they relate to housing needs for the Medical University on sites adjacent to currently owned properties. Sites under study are those on which the single family residential character has never been developed or where it has been broken by successive layers of poor development. This new development would endeavor to fulfill present and future growth needs of the renting student population as well as integrating private and public housing in an area that is becoming increasingly rigidly institutional in character.

HISTORY OF THE UNIVERSITY



THE MEDICAL COLLEGE OF SOUTH CAROLINA CIRCA 1845

HISTORY OF THE MEDICAL UNIVERSITY OF SOUTH CAROLINA

The Medical College was first chartered by the South Carolina State Legislature in 1823 and held its first session beginning November 8, 1824. The College operated under private directorship until 1913, at which time it passed into the hands of the State.

Charleston in 1800 was a notable center of culture and scientific interest. Strong ties existed between local physicians and scientists and their original teachers in Europe. In 1800 there were 14 medical practitioners in the city, members of the Medical Society of South Carolina. A dispensary was formed to attend to charity cases. This clinic held regular meetings to which medical students were invited to contribute. Legal control of the practise of medicine was established with the licensing boards of 1817, but this was abolished eleven years later. Nevertheless Charleston enjoyed a reputation for quality medical care form the earliest days of the city. Close connections existed between local doctors and the College of Philadelphia School of Medicine which had been established in 1765, followed by the Medical School of the University of Pennsylvania. Dr. David Ramsay came to Charleston from

Philadelphia in 1774, where his "talents might ripen in the company of other prominent people." Ramsay was the first to promulgate the idea of a Medical College in Charleston, and he was seconded by Benjamin Sessions, a physician educated in Edinburgh, London and Paris. Sessions advocated a series of lectures as a medical curriculum, and the establishment of a teaching hospital "of a few beds, for negroes." The lectures began in 1803. 1823 saw Charleston as a city of 40,000 while Columbia had a population of 4,000. Charleston had boasted 45 physicians in attendance at the Medical Society meetings and ranked with Boston and Philadelphia as a teaching center. All the original faculty of the College were graduates of the University of Pennsylvania.

Thomas Prioleau became the first Dean in 1824. The new building was funded by the city and constructed in the Marine Hospital Yard on Queen Street, then on the tidal marsh. A second building was later designed for the College by Frederick Wesner, one of the first buildings in the United states dedicated to medical education. The first curriculum included Anatomy, Surgery, Materia Medica, Institutes and the Practise of Medicine, Obstetrics and the Diseases of Women and Infants, Pharmaceutical Chemistry and Pharmacy, and Natural History and Botany. Five students were graduated from the first class. In 1835 the Medical School

moved to the Charleston Theater Building at Broad and New Streets. Medical education flourished until the Civil War, but continued at a low ebb after the war, as did the city.

In 1910 the Flexner report to the Carnegie Institute rated Medical Schools in the United States, dividing them into three categories. Medical University of South Carolina was deemed "without adequate resources." Thus in 1911 the University made application to the State for adoption and support. This application was accepted under the proviso that the Medical School move to state property between Calhoun and Barre Streets, to be donated by the City. New building were to be funded by private contributions. However, as the School became a state institution in 1913, it still had inadequate yearly funding to qualify as a top grade educational facility.

The development of the present University began in 1920 with the construction of the Physiology-Pharmacology Building. This was followed by the Library in 1930. In 1930 and 1935 Bernard Baruch funded outpatient facilities, clinics, the Anatomy Building, and by 1943, the original quadrangle. The quad was completed with the Laboratories, Clinic, Cancer Clinic, Department of Anatomy and School of Pharmacy in 1952.

Throughout this period accreditation was marginal and spirit low, exacerbated by a post-Civil War law which allowed only 20% of the students to be South Carolinians.

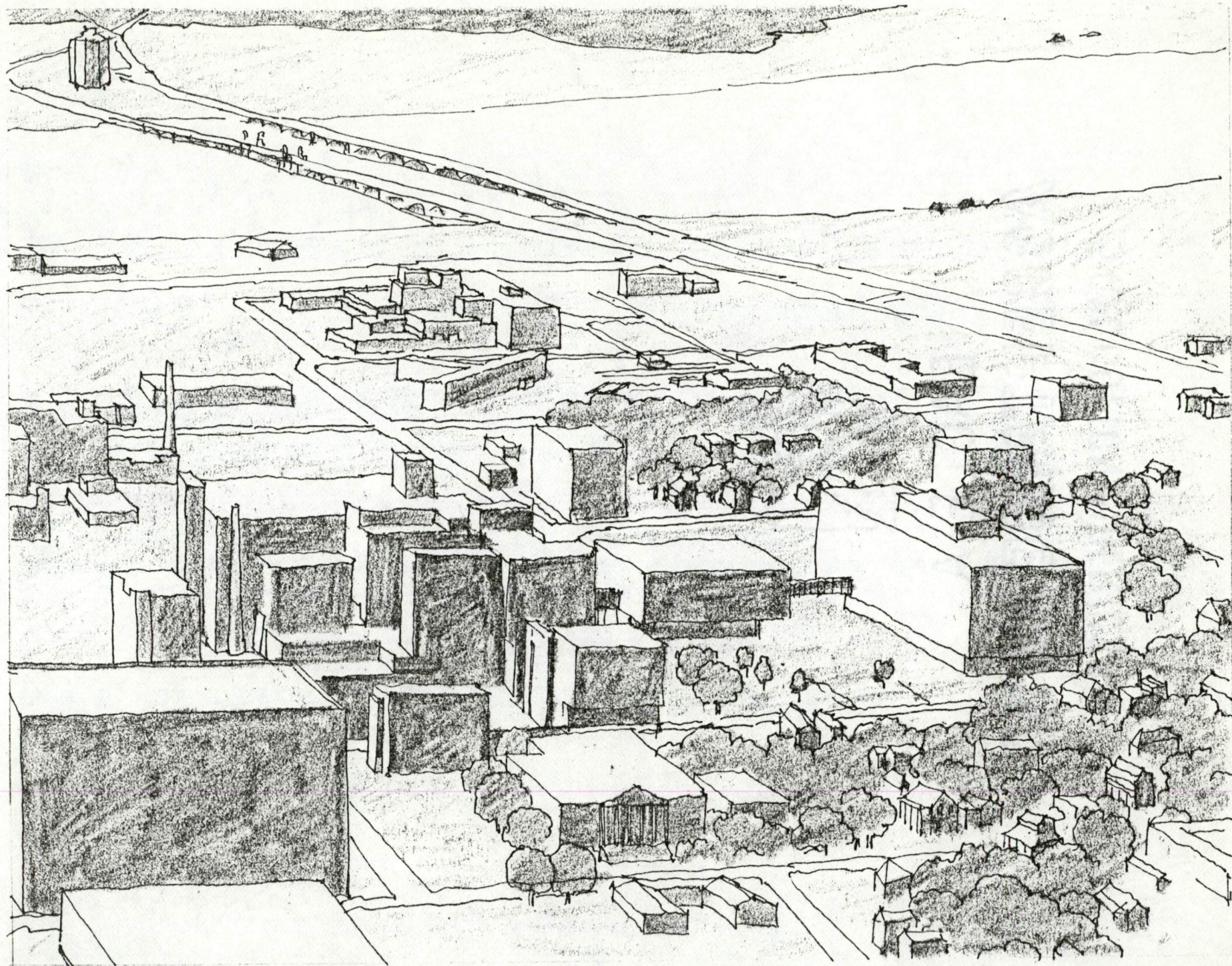
Despite these hard times for the University, between 1945 and 1960, the first Master Plan was drawn, the first in the country to ideate a "medical center." This was known as the "South Carolina Plan." The Plan involved the concept of acquiring a teaching hospital and the increasing output of graduates. Although the City opposed the new hospital, a 66 2/3% Federal grant ensured the success of the plan, and the new hospital was begun in 1951, just after the University acquired front-rank accreditation. The original plan called for a complex of Service and Research Centers, Medical and Health Science Education Facilities, Clinics, Schools of Pharmacy, and Nursing, student housing, and a Student Activities Center.

In 1951 an agreement was reached with the County of Charleston that the marshes north of Calhoun Street would be filled and that one half of the land would be donated to the County and one half to Medical College. Courtenay

street delineated the two parcels, but by the completion of the Hospital in 1955, no further land was available for University expansion. In 1954 the University pushed west of Courtenay with the construction of the Alumni House dormitory and student activities center. This was followed in 1965 by the 14 million dollar building program of the School of Dentistry, the Waring Library and the Basic Sciences Building.

Today, with an enrollment of 2,000, and with projected enrollment for 1990 at 2600, the University includes the disciplines of Medicine, Nursing, Dental Medicine, Allied Health Sciences, Graduate Studies and other related health professions. These disciplines are further serviced by the new Learning Resources Center, a research arm conducting important and nationally recognized study in fields of Pharmacology, Psychiatry, Medicine, Dental Medicine, Anesthesiology, Radiology, Neurology, Family Practise, and others. The University functions in concert with the three hospitals and their 1200 beds, Medical University Hospital, Veterans Administration Hospital, and Charleston County Hospital. These teaching hospitals serve as important and focal facilities in the overall health care of the City, surrounding counties,

and indeed the state. The new Eye Institute forms an important part of the health care complex as do the Clinics, operated under the direction of the departments and extending outpatients services. Future growth of the clinical arm of the University will include a childrens' hospital and a psychiatric institute.



HISTORY OF THE COLLEGE UNION

University unions originally developed as outlets for the exercise of free speech for students, outside the power and directive of the University governing bodies. The first union was organized at Cambridge University in 1815, as a debating society. The Cambridge Union existed "to encourage debating activities and to hold debates without disturbances from other students, and to give more freedom and liberty to their discussions." The first union was of uniquely diverse membership. This was not the case in the first American unions, which functioned more as private clubs for closed groups. The Cambridge Union met in a "low, ill-ventilated, ill-lit gallery at the back of the Red Lion Inn, a cavernous-tavernous, something between a commercial room and a district-branch meeting house." The backlash from the University governors caused a refusal to license the Union, but permission for debate was regranted in 1821. With the Oxford Union Society in 1823, increasingly large audiences were drawn to the debates. As a result, "reading rooms" were established for early arrivers. Discussion after the debates led to the institution of food service and recreational rooms and eventually to conference rooms. The Cambridge Union secured a new building in 1852 which

subsequently underwent additions for writing rooms and a debating hall.

"The dignity of the union idea plus the social prestige of the members demanded surroundings of refinement." The new Union was a handsome building with frescoes by Rosetti, Burne-Jones and Morris, setting a standard for well-planned, beautifully detailed buildings to house unions. The ideas for the college union spread to Harvard in 1832, and the first American Union was established there. At the Rensselaer Polytechnic Institute Union of 1890, students organized "to promote the best interests of the University in both athletics and social life." Unions first became completely independent entities in 1896 at the University of Pennsylvania where the union was largely inspired by the campus YMCA; the construction of Houston Hall combined a swimming pool, a gymnasium, reading rooms, writing rooms, and meeting rooms, dining areas, auditoriums and offices.

A major change in the ideal concept of the union occurred in the 1920's. Greater importance was given to human interaction within the union; the union was henceforth to be regarded as the place for programs which fostered understanding and communication between sometimes disparate groups,

and certainly between two sexes. The original intent of "harmless recreation and amusement" became "illumination and enhancement of personal and social living." Unions doubled in number in the 1930's, reaching 145 in the United States. As the institutions of higher education mushroomed, and as existing institutions grew in size and influence through the 1960's, union buildings became major service centers as well as educational and recreational facilities.

Statement of Purpose adopted by the 1956 Association of College Unions

1. The Union is the community center of the college for all members of the college family, students, faculty, alumni administration, and guests. It is not just a building; it is also an organization and a program. Together they represent a well-considered plan for the community life of the college.
2. As the "living room" and "hearthstone" of the college, the union provides the services, conveniences and amenities the members of the college family need in their daily life on the campus and for getting to know and understand one another through informal associ-

ation outside the classroom.

3. The Union is part of the educational program of the college:
 - a. As a laboratory of citizenship, training students in social responsibility and for leadership in our democracy.
 - b. Through boards, committees and staff it provides a cultural, social and recreational program, aiming to make free-time activity a cooperative factor with study in education.
 - c. In all its factors it encourages self-directed activity giving maximum opportunity for self realization and effectiveness. Its goal is development of persons as well as intellects.
 - d. The Union serves as a unifying force in the life of the college, cultivating enduring regard for and loyalty to the college.

BUILDING PROJECT

CLEMSON UNIVERSITY LIBRARY

PROBLEM STATEMENT

Unlike most institutions of medical education in this country, the Medical University of South Carolina exists as a separate entity, without the support of the social and recreational facilities usually considered essential to the complete educational curriculum. The University at present does maintain recreational privileges at the College of Charleston and The Citadel, but is constrained in the use of these facilities by limited schedules and remoteness from the University activities. There is virtually a complete lack of spaces within the University for social interaction, and inasmuch as the residential program of the University has until now been limited, the development of non-academic programs, including dining, has been retarded. It is the desire of the University, in the implementation of the Master Plan and the physical expansion of all departments, to provide space for recreation and social interaction within the University for students and faculty.

Present dispersal of facilities, faculty, and students, make it difficult for members of the University community to stay in close contact,

lessening the sense of community for its members. This lack of community feeling, reinforced by the fact that the University remains primarily a commuter campus at present, has the further effect of weakening the impact of identification with the University on its graduates. The rigorous disciplines involved in University study tend to naturally exaggerate the fragmenting of personal and professional lives among students and faculty. Schedules are always tight for community members, and despite its commuter aspects, the long hours of work at the University dictate the need, within the physical plant, for programs and facilities that will enhance both the professional and personal development of the individual community member.

These needs will be adequately served by the construction of a campus student center. This center would be characterized as a central meeting place, offering a wide variety of activities and programs which would solidify interaction among community members and help to reinforce the identification of the University, by all groups, as an institution where mind, body and spirit are nurtured. Functions which will realize this ideal will include dining, meeting, athletic-recreational, working, (supportive of existing

educational programs), commercial, and cultural. Specific provision will be made for a variety of dining experiences, from traditional halls to more private facilities, and snack bar facilities. Office space is required, as well as large and small meeting spaces. Lounging areas, games areas, and space for cultural expression are required. The Center will house a bookstore, a post office, and a student bank. A swimming pool, racquet courts, a gymnasium, and locker facilities will be included. The center will function within a larger setting of both free and fixed activity, including outdoor recreational and meeting spaces, gardens and movement spaces.

In total effect, the Center will be the focus of return for the University, for the community member and for alumnus. It will further complete the balancing of poles within the single entity in the effort to establish a wholeness to the quality of life at the University.

PROJECT GOALS AND OBJECTIVES

A. University Integration

The Center shall enhance concepts proposed in the Master Plan of the University. A logical and immediately recognizable order shall be established by the interrelation of the three main division of University facilities: Clinical, Academic and Supportive. Efficient function shall be determined by the strength of traffic flow between these divisions, and the Center shall establish both the boundaries to this flow, and define entrance to the campus entity in the western sphere.

Travel through the University will be measured by two clear paths, each with a unique character. Movement in the one will be accelerated, through structures as begun in existing buildings, allowing a dynamic flow from the two giant clinical areas at either end of the campus, Medical University Hospital and the Veterans Administration Hospital. The second path will resist speed in travel, will orient the traveller to the campus as a whole, the interiors and the

exteriors of the campus. The former will define the logic of the internal workings of the campus, while the latter will formalize its separate parts. The two together shall create a loop of circulation from which all University functions will be accessible with the least obstruction.

B. Siting

The site will serve as a switching center for the campus, not at the hub, but at the "western gate". Visitor access to the campus will be maintained at the formal entrance to the East, while access for the University members will be established at the Center. Re-routing of travel will also occur at the Center site, as the members come and go throughout the day.

The site will establish the western limits of the campus as a pole, juxtaposed to the Library at the eastern limit. City traffic will not be interrupted as it passes between the Center site and the rest of the campus. The site will be treated as an entity unto itself, in every aspect fulfilling the program needs of the University as a

recreational and social center, while maintaining its role as a cornerstone of the campus. This fixed role will be established by the "shafts of space" which integrate the site and the Center with the rest of the campus.

The site shall further establish links with the Veterans Administration Hospital and future residential development for the University.

Treatment of the site will include public and private areas of activity, defining proper function and maintaining differentiation, and security, from the non-campus. The Center will be planned to enclose in one area and to open in another, relating to the two paths of travel. The Center shall in this way maintain its secure identity as a part of the private campus, while inviting entrance to the campus from the city.

The site shall make use of all views to the river, and views within the University; it shall take advantage of sun, heat, light, and

breezes, without appreciably denying these to its neighbors.

C. Form

Formal elements shall be established which regard for both the established modular character of the existing University, as well as the historic, stylistic, and decorative character of Charleston, the uniquely beautiful city.

Special consideration shall be given to the real sphere of influence of the Center, as it generates streetscapes, as it serves as a landmark from the Ashley River bridges, and as it blends as a part of the campus while maintaining a unique character in the midst of the institution.

Form shall endeavor to relate to the human activity housed within the form, identifying a pocket of human scale within an environment of monolithic structure, while maintaining an easy visual passage from the surrounding forms to the Center itself.

The Center shall take special consideration for forms generated from

environmental and historical precedents, those determinants that define the regional character of the City of Charleston, which have been all but lost in recent local construction.

D. Structure

The structure shall be appropriate to recreational and social functions. Construction shall be facilitated by a rigid repetition of bays and members; this repetition will ensure maximum adaptability to changes of function in the future within the social center, while establishing order within that flexibility. A conceptual statement regarding the human activity within the Center shall also be described by the structure, in both interior and exterior spaces.

E. Function

Functional requirements shall be adequately fulfilled while maintaining the maximum degree of flexibility for future functional change. The large athletic areas will be necessarily fixed. The basic concepts surrounding the programs of the Center will be realized in the interrelation of both fixed and adaptable spaces.

Maximum social interaction shall be achieved through proper horizontal layering of functional spaces, where servant spaces line the exterior, and increasingly open and connected areas move toward the heart of the center. Movement spines of the University will pass through the broad functional divisions, generating easy access to all spaces in either mode, accelerated or sightseeing.

F. Psychology

Function, structure, form and siting shall contribute to the psychological balance and well-being of all users. This balance shall be achieved through variety in the context of a discernable order, in color, in ease of movement, in the integrity of space, in the presence of light and air, and in the merging of the man-made with the natural landscape.

ACTIVITIES

The activities program is distinguished by four broad catagories. These catagories are: Athletic, Social, Food Service, and Commercial.

Athletic Activities

A fairly complete program of recreational athletics shall be offered to the community through the athletic facilities. Swimming will include both lap swimming and recreational swimming, as well as diving. These swimming programs will be both scheduled and unscheduled, with the likelihood that, given the character of the University student body and faculty, and the nature of the related academic program, competitive swimming will not be the norm. Swimming activities will include, however, the possibility of guest competition within the facility, as well as the occasional intramural swimming within the community. The diving and swimming games will be accomodated outside the lap swimming area, making the simultaneous performance of these activities possible. Related activities will include sun-bathing and deck games.

Gymnasium activities will include full court basketball; as well as overlaid courts for volleyball and two half-size basketball courts for peak-activity times during the day. Viewing of gymnasium games will be accomodated with bleacher seating for large numbers of people. The whole of this space will also enclose a variety of non-athletic, scheduled activities. These activities, including theater production, lectures, large meetings, dances and other large social events, will also be able to make use of the seating designed for the athletic viewing. Storage will be provided to support all of the activities within the gymnasium spaces, for both audio-visual and stage equipment, as well as athletic equipment for games and large format exercise.

Handball will be played in fixed courts, and space will be provided for a wide range of weight-training activities. A fixed weight machine and loose weights will comprise the equipment necessary for the instructional and the free activities in the weight-training area. Ballet-dance as well as gymnastics will be accomodated, as well as

the active games requiring fixed equipment, such as ping pong, table hockey and football, foosball and pinball.

Within the sphere of each separate athletic program, an instructional program will be offered. General training, sports medicine, and administrative and record-keeping activities will be a part of the overall athletic picture. All activities will revolve around the central service activities related to the locker room facilities. These activities will include saunas, whirlpools, showering and dressing for the community members. A linen and towel service will be provided and accomodation for fixed, or temporary locker facilities for at least half of the University community.

Tennis and other outdoor games will be accomodated within the athletic program. The site will further be developed to allow for the future inclusion of lawn games presently unspecified.

Food Service Activities

Dining Activities will be varied in character and in operation. These activities will be distinguished primarily by the effects of scheduling.

Scheduled Dining

Traditional University dining will be provided for community members within a framework of varied spaces. Dining halls will serve the major part of the community needs, serviced by traditional cafeteria service lines. While provisions will be made for whole or partial separation of faculty and student dining, this major dining activity will be characterized by the fulfillment of the primary goals of the student center program, the broad mix, integration, and meeting of disparate groups within the University. This dining activity will be regularly scheduled, three times a day during University session, during which time all University students and faculty will have the opportunity to take their meals on campus. Efficient progress from dining hall entries, through serving lines,

into the halls themselves, will be culminated by tray disposal at a central location. Dirty tray carts will be picked up within the halls and transferred to the dishwashing facilities within the kitchen area. The central kitchen will include cooking and baking, storage and preparation activities, and will serve as a distribution point for the large number of areas within the complex which may at one time or another require temporary food service. These areas include the gymnasium, the atrium, the bar and lounges, meeting rooms, as well as outdoor areas (for outdoor gatherings), and catering service for the rest of the University.

The central kitchen will also serve the private dining activity, a scheduled dining which will be characterized by buffet service distributed from a separate service kitchen adjacent to the central kitchen. The private dining will allow groups attending meetings to dine in privacy, separated from the general dining hall activity. The quality of dining will be quieter, more sedate, with a higher degree of service related to it.

Unscheduled Dining

Fast food service will be available for 16 hours per day with the likelihood of continuous operation, seven days per week, all year long. This dining will be open and more directly related to the varied activities of the Student Center, an activity that will function as a pivot for other activities. In this way the service will have the character of a snack bar, though the quality of restaurant service will be maintained. The relation between the fast food dining activity and all free activity areas will be emphasized in terms of actual use and movement, and this service will maintain its own integrity within the commercial sphere of the Student Center, with its own kitchen and related service and storage areas.

Social Activities

Social activities fall into two broad categories of administrative/student activity, and lounging functions.

Administrative Activities

A large number of administrative activities will be accommodated in the Student Center, relating to the Student Center operation as well as academic and non-academic activities in the University as a whole. Secretarial and clerical activities will service directors of the Center, Student Activities, Financial Aid, Professional Associations, Student Clubs, and Alumni Affairs.

Work areas will be provided for student publications, including newspaper and annual. Meeting rooms will be provided for 25 persons with the ability to open two meeting rooms to accommodate 50 persons. Student activity zones will include areas supportive of social and cultural programs: these programs will include Day Care for working mothers and fathers in the community, and the studio activities of

crafts, ceramics, painting and photography. Activities related to academic work will include library, study and typing. In addition, sleeping will be accomodated for students whose academic schedules require them to remain on campus for long periods of time.

Lounging Functions

Lounging areas will be provided for a full range of social activities. A main social hall will form the focus of the complex, accomodating a wide range of unspecified free activities; these activities will spill over from and into both fixed activity areas within the Center as well as activity areas in the landscaped zones of the Center.

Informal and formal meeting of associations, congregating prior to performance, performance itself, as well as viewing of activity in fixed activity areas such as the basketball court and swimming pool, will all be accomodated. Checking of coats, ticketing, information gathering will occur adjacent to a point of central control, from which vertical and horizontal movement patterns will be generated.

Individual lounges will provide space for television watching, for billiards, for card playing and other passive games, and for music playing and listening. All of these social lounge areas will work in concert in the event of large, scheduled parties and conferences, with single or multiple activities moving in and out of the various areas.

Commercial Activities

Three main concession activities will be developed within the Center, to serve the University community. A Post Office will be provided for both intra-University mailing as well as regular postal service. Students will keep fixed postal boxes at the center, numbering 2600 in all. Package mailing and needs for postal information will be accommodated at a main post office counter. A Bookstore, currently housed inadequately in the Basic Science Building, will provide a full range of academic and non-academic material for the community. The Fast Food Restaurant has been previously discussed. Finally, banking will be provided via an automatic banking machine.

BUILDING PROGRAM

SQUARE FOOTAGES

FUNCTIONAL RELATIONSHIPS

ACTIVITY SCENARIOS

Characteristically a student or faculty member will not use the center before 10 AM, though students in University housing will have the option of taking breakfast at the cafeteria at an early hour, or at the fast-food service at any time during the morning schedule. Student center use will conform with regular University working hours only in relation to specific functions that are staffed by University personnel on a regular workday schedule. Service personnel will have staggered hours depending on duties performed, while sales personnel will normally operate their concessions no later than 6 PM. The bookstore and Post Office will operate during the daytime commercial hours. Athletic/recreational areas will operate approximately 12 hours per day, commencing in the late morning, giving time for cleanup, restocking, and maintenance. Special use hours by groups for instruction or competition, will be scheduled independently.

Cafeteria dining will cover all meals for two hours each, with fast food service extending until 11-12 PM. Student service areas will generally be open for 16 hours per day but on occasion will function well into the night for special functions such as dances, conventions, etc.

Schedule

@ 8-6 workday

administrative offices

bookstore

post office

commercial concessions

cafeteria

main kitchen

@ 8-midnight

mail room

lounges

meeting rooms

fast food service

@ 11-10 PM

pool

gymnasium

exercise/games rooms

occasional late use

gym/stage

cafeteria/kitchen

pool

Scenario A

Ellen Jackson, a medical student in her second year, has regularly scheduled classes from 8-12 and from 1-5 every day. She is married and lives with her husband in a rented apartment 8 blocks away from the campus, riding her bicycle to school and leaving it at the bike racks at the Basic Science Building. At noon Ellen usually walks across campus to the Student Center, which takes her less than five minutes. She carries her lunch which she prepared at home but stops at the restaurant in the Student Center to purchase an iced tea. She then eats her lunch in the company of classmates and faculty on the terrace of the center during good weather. She checks her mailbox and the bulletin boards for messages and then returns to the Baruch Auditorium for an afternoon seminar. She goes home at 5:30 and eats dinner with her husband, an architect in the city. After dinner, she returns to the Library for study while her husband returns to his office. At 9:00 PM, three days a week, the couple meets at the center lobby. Ellen takes a vigorous hour-long swim while her husband uses the weight machine and swims for one-half hour. After showering and dressing they stop in the student

lounge to view the latest exhibition of artwork, and occasionally have a cup of coffee in the fast food restaurant. Her husband walks Ellen back to the library where she will study until midnight. He then proceeds home on foot. Ellen also attends monthly meetings of the members of the OBGYN Department, with local practitioners. She is the 2nd year liason for the State Chapter of the Association of Women in Medicine, and cordinates bi-weekly with the Director of Student Affairs in her Center conference room, planning programs, meetings, conferences, and mapping the bi-monthly publication that is produced by her cohorts in the Center publications room.

Ellen and her husband will also characteristically use the athletic facility for two hours each Saturday afternoon, and meet friends for a drink in the main cocktail lounge.

Scenario B

Dr. Miller lives and practices Dentistry West of the Ashley, but commutes to the University at 10 AM, three days a week, parking in reserved space at the Dental College Building Lot on Bee Street. After morning clinic with students and patients, Dr. Miller meets his son John who is a graduate student in Pharmacology, and who lives in new University housing at the Student Center. John has spent his morning in the laboratory after breakfasting at the Student Center cafeteria where he can get an economical and nutritious meal. After lunching together with friends in the fast food service restaurant, they both walk back to their respective offices in the main campus. At 3 PM they again meet for a game of racquetball in the athletic facility of the Student Center, after which Dr. Miller heads home, beating the rush hour traffic over the Ashley River Bridge. John finishes his working day at 6 PM and often goes back to the Center after eating out. He drinks several beers at the lounge concession and watches the late news before entering the game room to shoot hours of billiards with his friends. He plays basketball in the gym on Saturday afternoons. John's current

girlfriend is a nursing student and the couple rarely miss a social event
scheduled at the Center on weekends.

PROGRAM SQUARE FOOTAGES

Commercial

Bookstore

Lock Boxes (3000)	300
Lobby/Service	500
Sorting/Storage	1152
Office/Storage	500

Restaurant/P.O. Vestibule	500
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Restaurant

Seating	1920
Service Kitchen	380
Kitchen/Storage	760

Banking

Machine	50
Lobby	150
Service	50

Commercial (cont.)

Bookstore

Sales Floor

2300

Storage

760

Concession

250

Social

Lounges

Music Room		1000
TV Lounge	2 @ 450	900
Billiards/Cards		400
Social Lounge	2 @ 2000	4000
Employees		120
Student Activities		500

Office Area

Offices	8 @ 140	1120
Offices	2 @ 200	400
Conference		250
Open Office		1500
Storage	3 @ 120	360
Meeting Rooms	2 @ 380	760

Social (cont.)

Library	575
Storage	120
Library Office	120
Open Study	575
Carel Study	375
Listening/Tape Playing/Video	200
Annual Workroom	300
Newspaper Workroom	300
Student Activities	500
Financial Aid	575
Day Care	575
Office/Storage	120
Studio	
Kiln/Storage	120

Social (cont.)

Ceramics/Crafts		575
Darkroom		575
General Studio		380
Sleep	2 @ 120	240
Toilets/Lavatories	4 @ 180	720
Kitchen		180
Janitor/Cleanup		180
Trash		64

Food Service

Dining Halls

Main Hall	6650
Faculty Dining Room	1150
Private Dining Room	1150

Service Line

Food Service	510
Dish Distribution	64
Cashier	64
Office	80

Kitchen

Salad Preparation	250
Bakery	250
Dry Storage	120
Bulk Dry Storage	760
Refrigerated Storage	360

Food Service (cont.)

Dish Washing		550
Dish Receiving		120
Dish Storage		70
Dirty Dish Carts		120
Serving Kitchen		120
Cocktail Lounge		900
Bar		480
Toilets/Lavatories	2 @ 320	640
Coats		120
Telephones		120
Trash		70
Chair and Table Storage		120

Athletic

Outdoor Pool		1250
Indoor Pool		
Lap Swimming Pool		3750
Diving Pool		800
Pool Surrounds		5000
Pool Storage		200
Pool Mechanical Room		120
Pool Office		120
Gymnasium		
Games Floor		10750
Rollaway Bleacher Storage	2 @ 200	400
Stage		760
Dressing	2 @ 120	240
Handball Courts	6 @ 800	4800

Athletic (cont.)

Active Games Room

Ping Pong, Foosball, etc. 1600

Equipment Storage 320

Weight Room 1600

Dance/Gymnastics 960

Office Area

Offices 4 @ 140 560

Secretarial 2 @ 120 240

Training 140

Storage 120

Sports Medicine 140

Storage 120

Security 2 @ 250 500

Athletic (cont.)

Locker Area

Lockers (2 x 680)	2 @ 640	1280
Toilets/Urinals (6)	2 @ 100	200
Lavatories (5)	2 @ 120	240
Showers		
Individual (6)	2 @ 75	150
Gang	2 @ 100	200
Towelling	2 @ 100	200
Whirlpool	2 @ 120	240

Sauna 120

Equipment Issue 120

Active Storage 150

Linen 120

Service 120

Trash 120

Mechanical Areas

4000

TOTAL

90480

Circulation @ 20%

18020

Gross Square Footage

108500

Actual Gross Square Footages

Student Center

Level 1	23232
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Level 2	24576
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Level 3	19968
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Total	67776
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Atrium	15500
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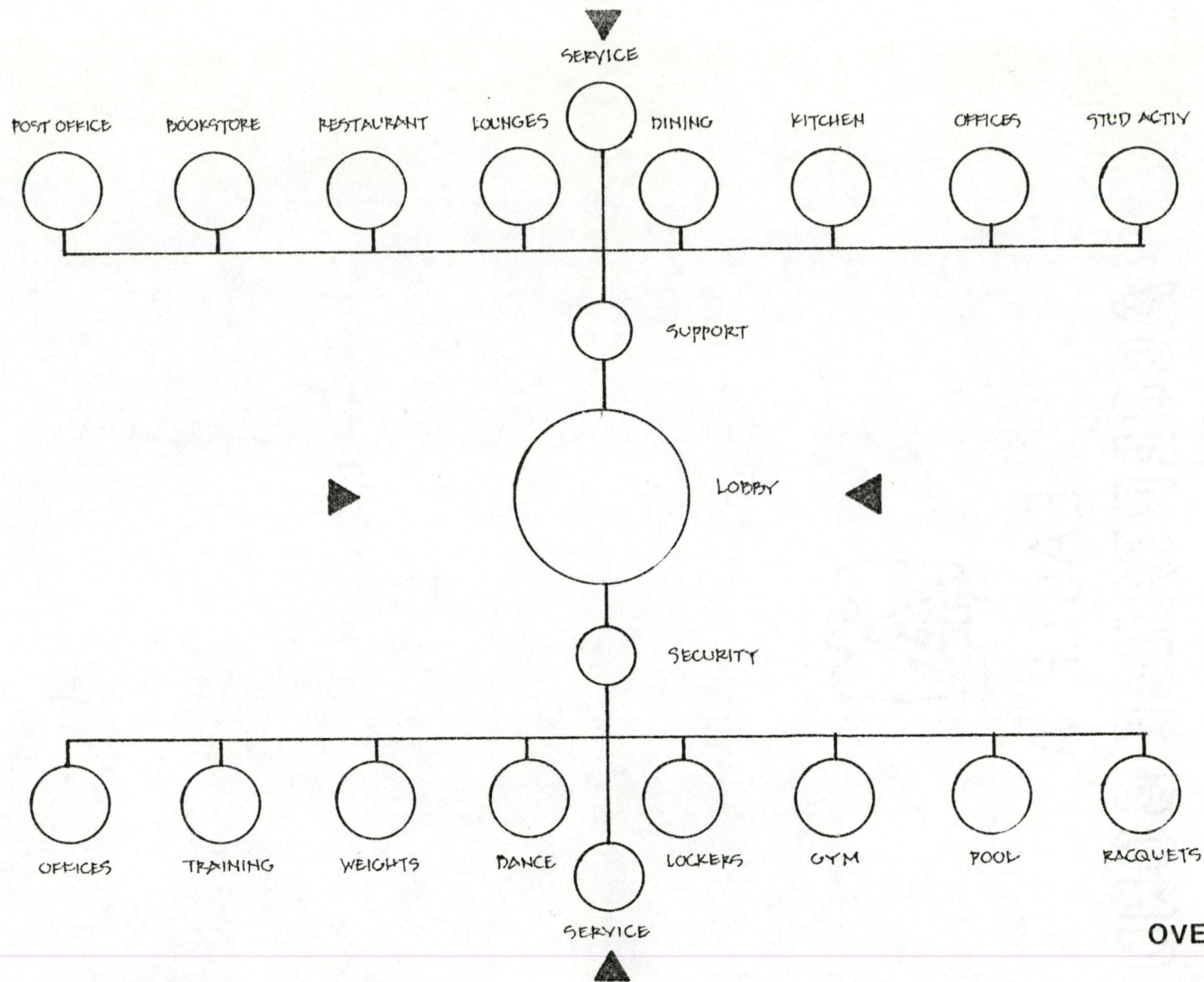
Athletic Center

Level 1	36160
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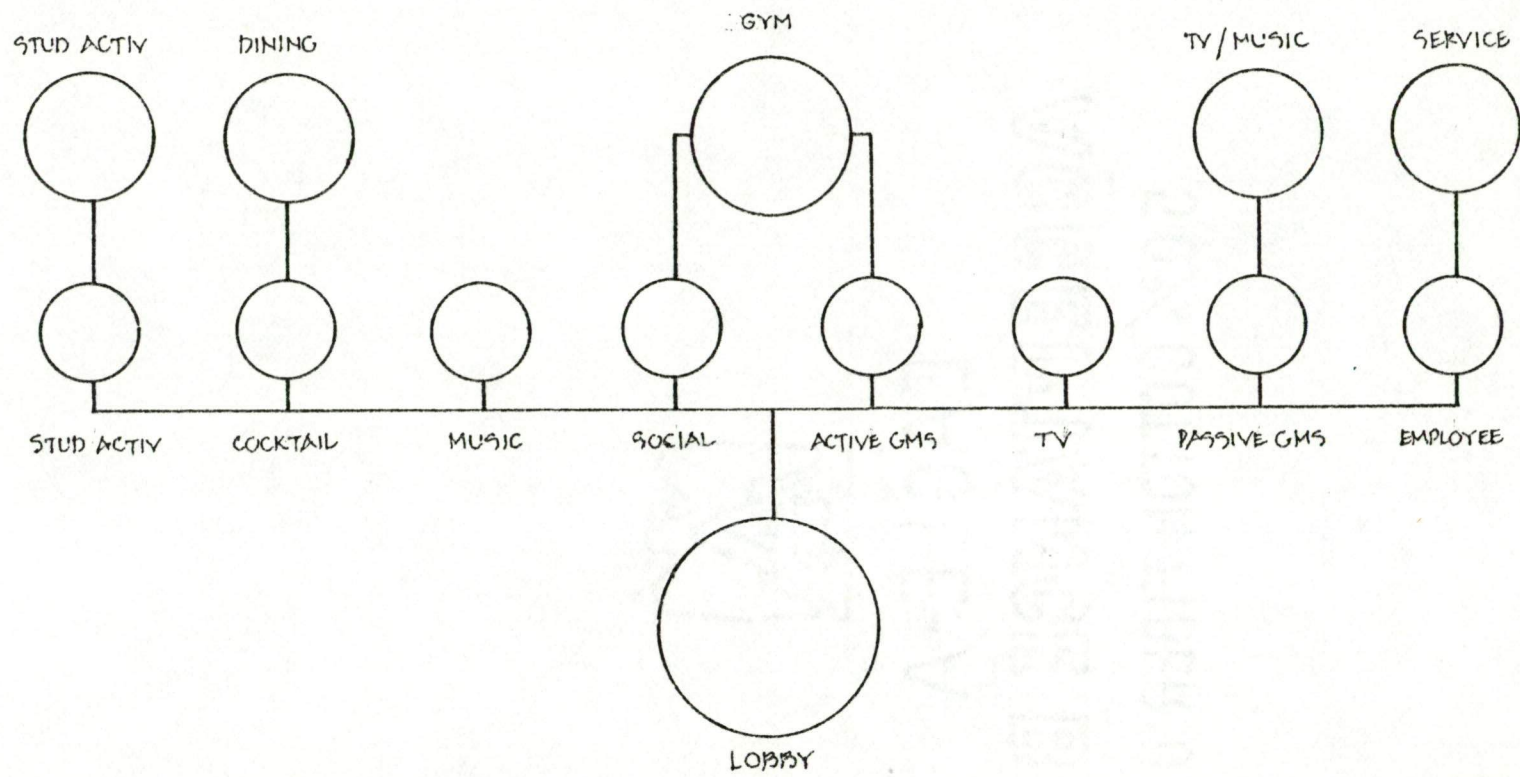
Level 2	11712
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Total	41872
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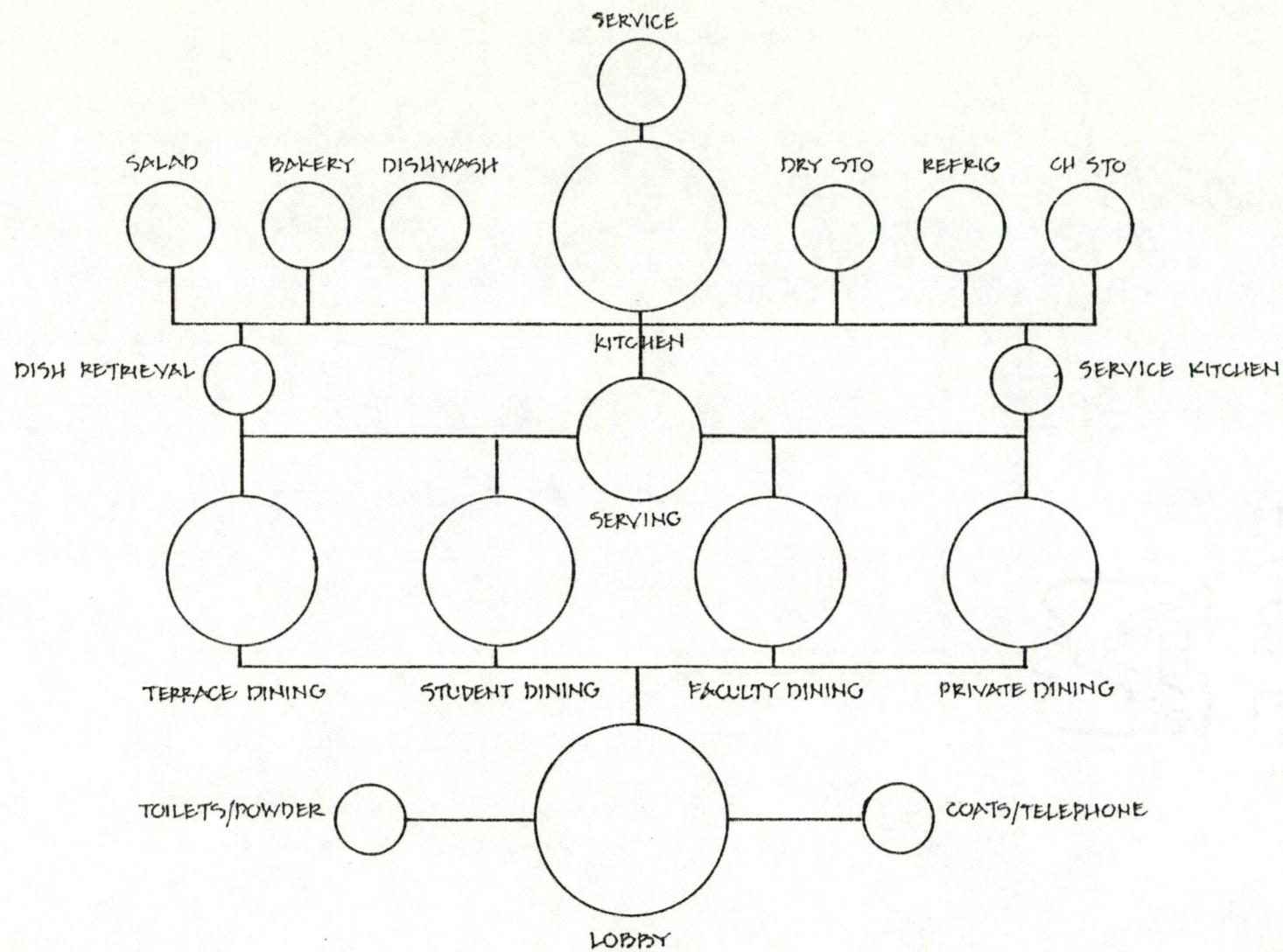
Grand Total	125150
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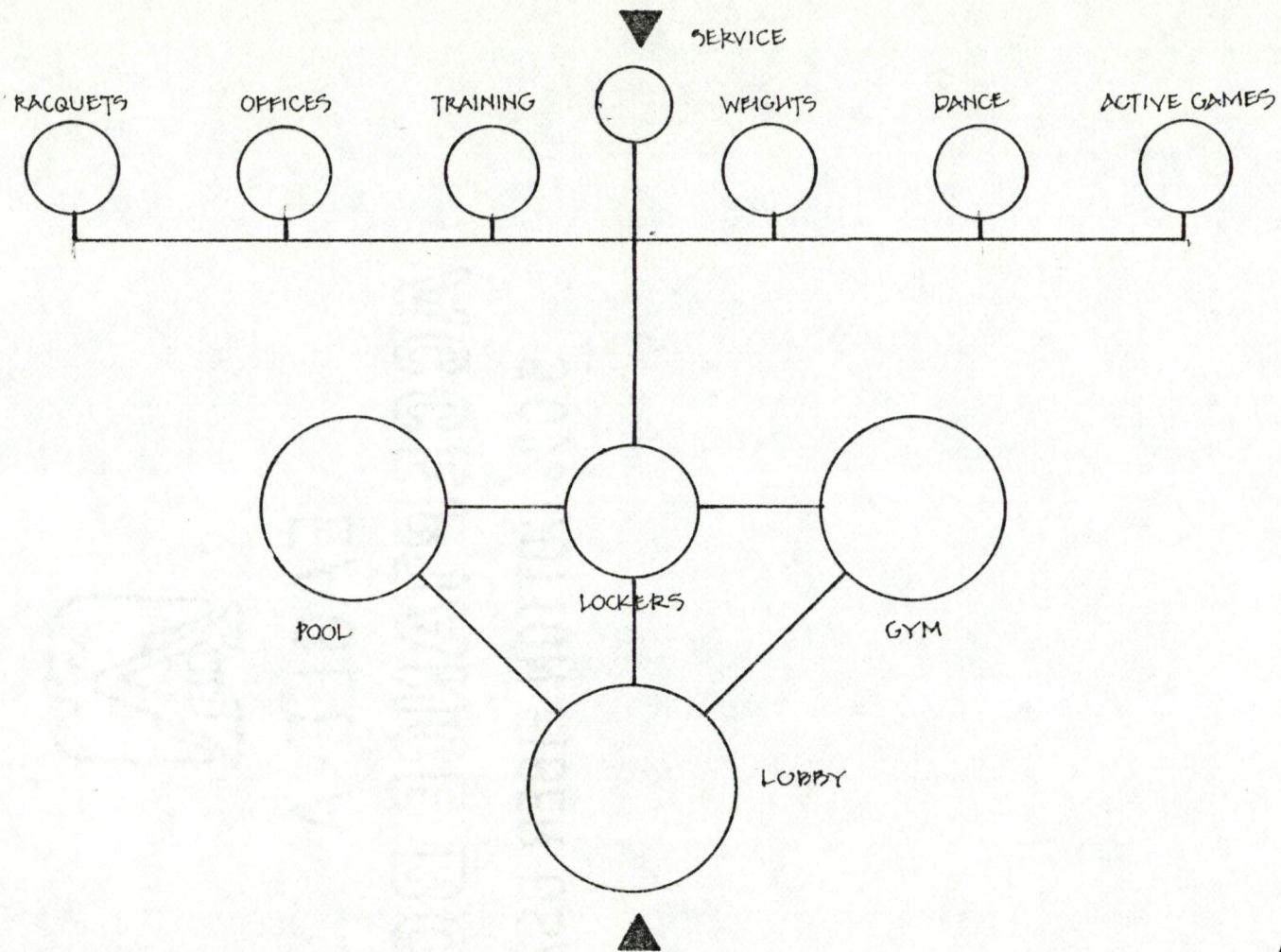
OVERVIEW,



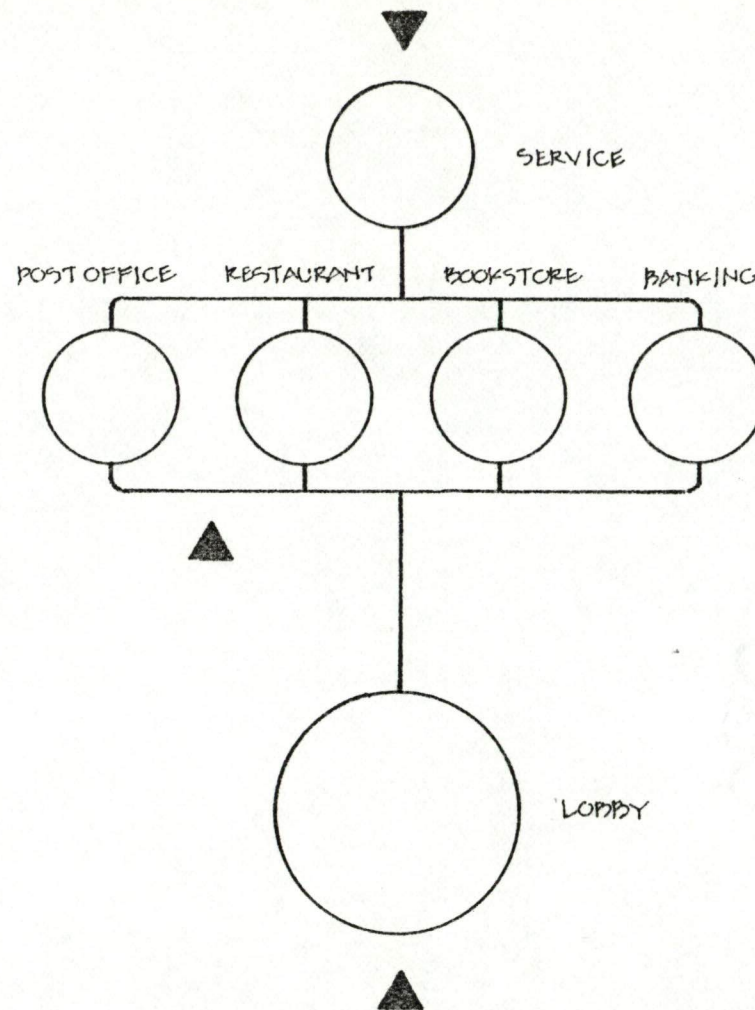
LOUNGES



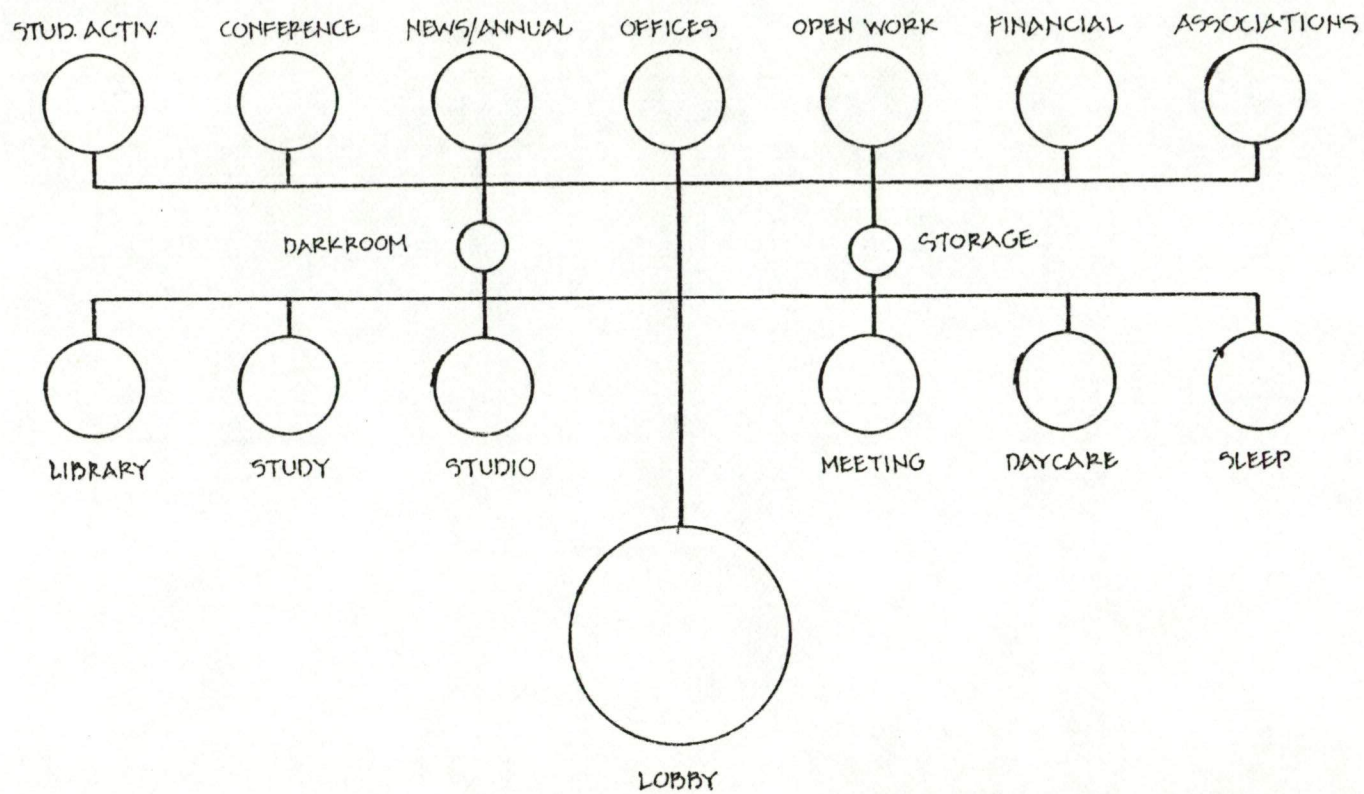
DINING



ATHLETIC



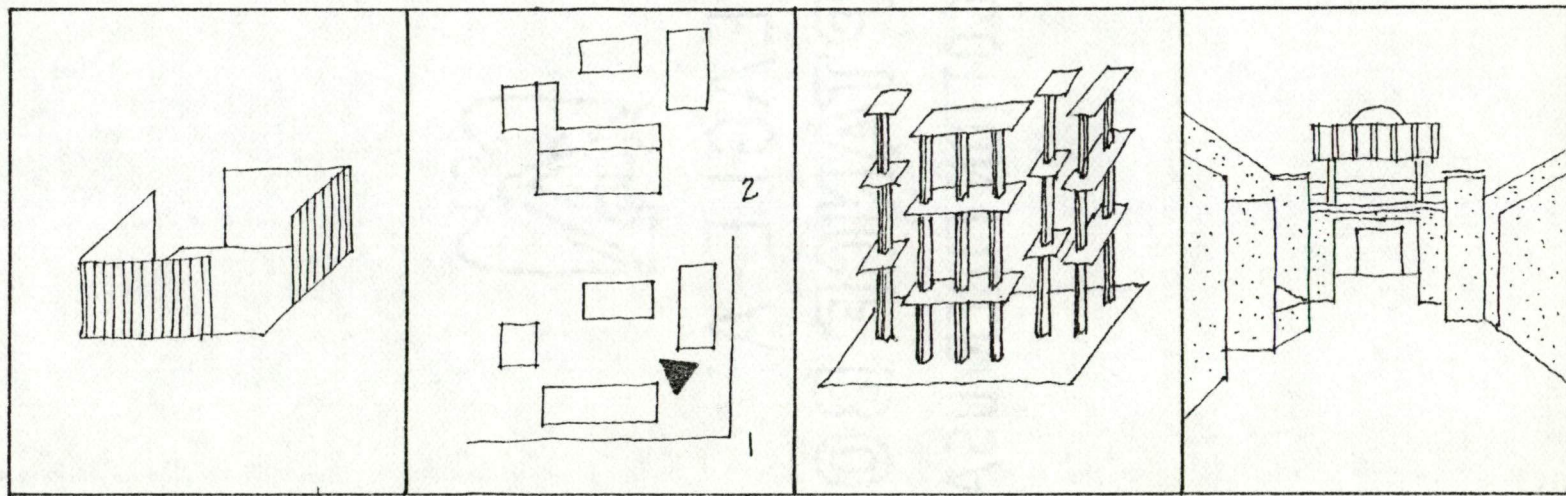
COMMERCIAL



ADMINISTRATION / STUDENT ACTIVITY

RESEARCH

PEMBROKE DORMITORY



CONCEPT

FUNCTION

CIRCULATION

ENTRANCE

Pembroke Dormitories, Brown University

Providence, Rhode Island

1970

MLTW/Moore, Lyndon, Turnbull

The Pembroke Dormitories, in its original concept, sought to evoke the complexity, mass, silhouette, and level variation present in Mediterranean towns. Two disparate streets invited a variety of streetscapes defined by building response. Terracing, balconies, bay windows, towers and house fronts all function as the organizational details of a complex sequence of spaces, in which phantom facades work within the real facade of the street elevations, in which architecture and graphics meet and play against one another.

Programmatic directive required the overall planning to accomodate the conversion of the dormitories into future apartments. At the outset, however, housing for 200 to 250 students was provided, subdivided into units for 8 to 10. Street-level shops belie the internal workings of the complex and add a further dimension to the experience of space as one traveled into the interior of the building. The central plaza, a myriad of discreet areas defined by architectural elements, accesses at the heart of the building

to the separate entries and lounges of the units, while second-floor terraces interlock four units. A horseshoe circulation allows access to single and double rooms on each floor of the units, horizontal travel being separated from the plaza levels except at the terracing levels. Each unit functions as a private house, with the logical connection at the perimeter walls strengthening the impact of the whole complex as an urban landscape.

The symbolism attached to various experiences within the building is made as obvious as possible, in the attempt to reinforce the identification of the experience on one hand, and on the other as a "reaction against the heroic posturing of would-be form givers". Symbolic gates allow passage to the intricate heart of the building, the central plaza, and everywhere there exists a delicate play between elements, between the sculptural elements of doors, windows, railings, and plaza furniture/construction, and the architectural planes and masses.

ANGELA ATHLETIC FACILITY

Angela Athletic Facility, St. Mary's College

Notre Dame, Indiana

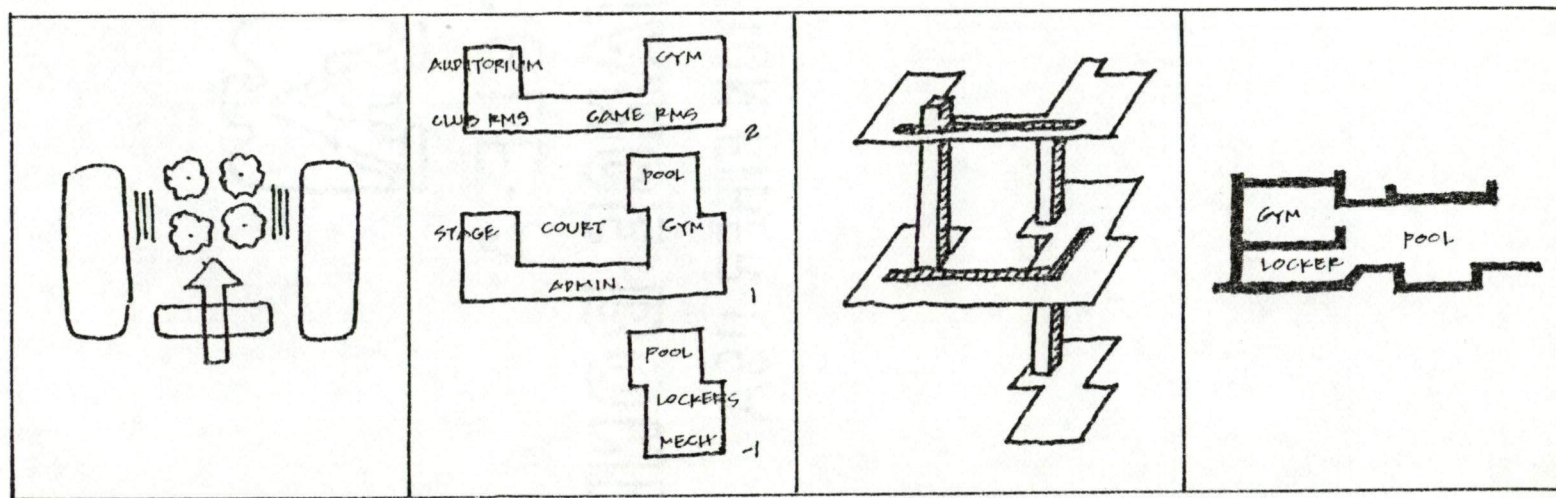
1978

C.F. Murphy & Associates

In concept the building was to act as a foil to perceived unappealing, existing campus architecture. This ideal is primarily realized in the use of new materials, and in the lightness and simplicity of the building. While existing buildings are ponderous and facade-like, the gymnasium seeks to fill the open space with a transparency and "racy stylishness".

These ideals are realized in the perfectly simple plan organization and the shining and diffusing of light as it enters the single large space. Bermed sides of the building both reduces the scale of the structure and allows access at a spectator level. Perimeter circulation, an absence of free-standing columns, and the translucent fiberglass wall panels, all support the multi-purpose program and character of the building. Use of color heightens sense of place and time as well as the identification of use areas.

WILMINGTON JEWISH COMMUNITY CENTER



CONCEPT

FUNCTION

CIRCULATION

SECTION

The Wilmington Jewish Community Center

Wilmington, Delaware

1976

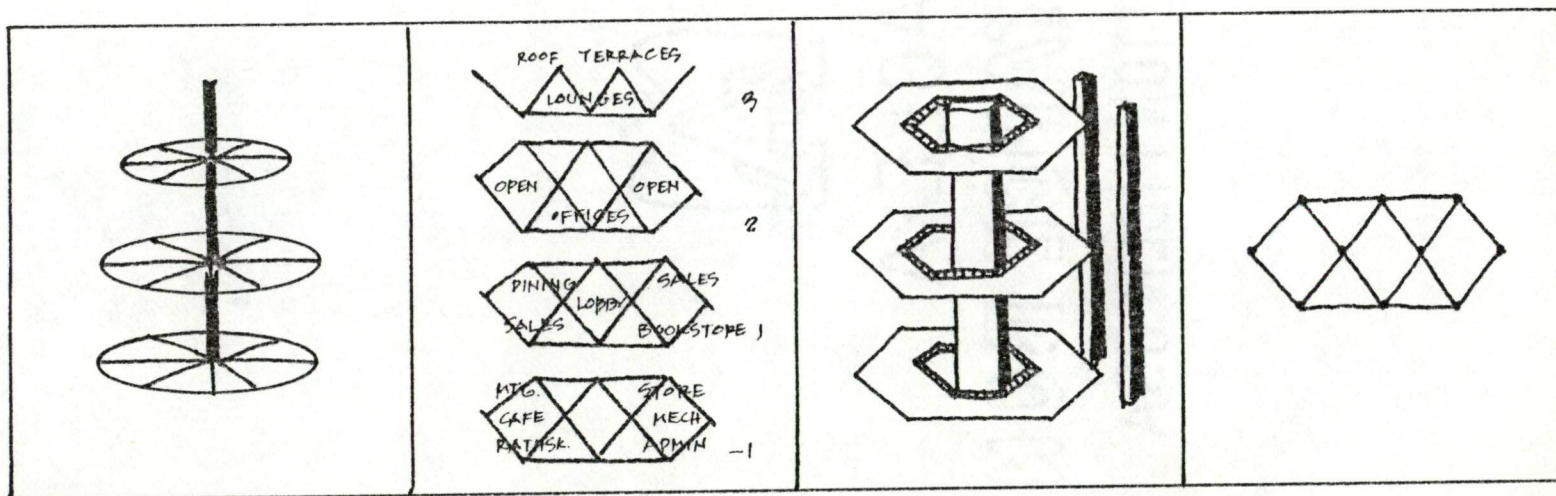
The Architects Collaborative

In concept, the center is to function around an enclosed, open-ended outdoor court with athletic and social functions grouped as foci at the ends of a U-spine of circulation. Each ground floor function has an adjacent and related outdoor activity area. Club rooms are separated vertically, allowing scheduled activities to take their place independent of the free-flowing ground floor.

The athletic facilities, with its split-level organization, allows basement servicing, and a high degree of integration of athletic and social areas on the ground floor. Circulation is easily appreciated, with main entrance in to the center of the U-spine, flaring to the athletic on one side and the large meeting on the other, and opening directly onto the enclosed court. Careful treatment of glazed areas, and landscaping, help to extend major functional areas to the outside. The whole building is heavily imbued with the stylistic imperative of a powerful architectural

firm, that same character that the firm has applied to a wide range of buildings for over a decade. The proportions and relationships of elements in nevertheless harmonious, though studied, and this studied quality is likely forgotten by the user once the internal organization of the building is experienced.

SAN FRANCISCO STATE UNIVERSITY STUDENT UNION



CONCEPT

FUNCTION

CIRCULATION

GRID

San Francisco State University Student Union

San Francisco, California

1978

Paffard Keatinge Clay (after Moshe Safdie)

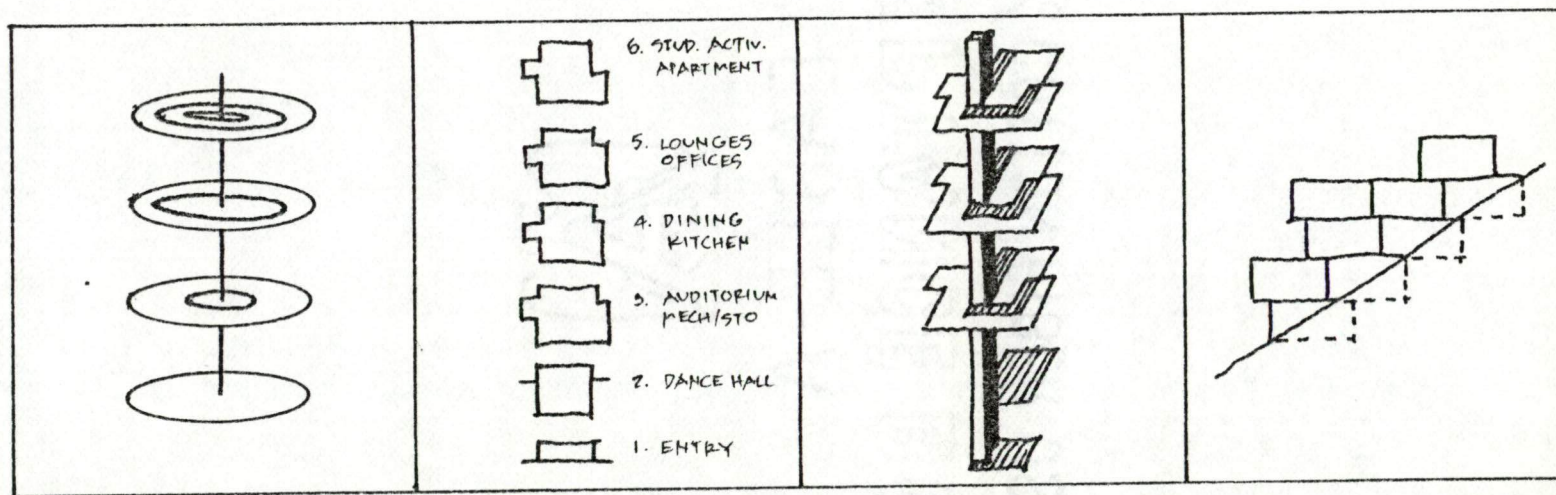
The San Francisco State University Student Union was designed over a number of years with great input and opposition from community members, students and University officials. The building was to be a center of movement and vitality, crystalline forms through which a diagonally positioned lobby generated circulation. The restaurant, student sales areas, and the bookstore are located on the ground floor. Meeting rooms, a cafe, and rathskeller are housed in the basement. The two opposing forms of precast concrete, positioned on the upper levels, sweepingly characterize the building from the interior and exterior. These pyramids, the "pyramid of sound" and the "pyramid of silence", while purporting to accomodate "sun-worship", give some logic, focus, and balance to an otherwise slightly chaotic organization of functional spaces.

Giant porcelain-enamelled doors open into the diagonally cross-cut lobby with its central grand stair. All functions are grouped within

the triangular structural bays which surround the lobby. Accessory stairs are separated from the building proper on the perimeter walls, varied rather than repeated extensions of the interior circulation patterns.

Two giant, steel space-frame pyramids with wide-flange girders, rise from the base structure at 22.5 degrees on the top surface and 45 degrees on the bottom, each containing stairs leading to four partial floors within the pyramids. The undersides of these pyramids are faced with precast concrete panels. This whole monolithic assembly is supported by the roof slab and structure of the base structure, paired, diagonal, box columns. Despite the weakening of original concepts in actual functional inter-relationships, the basic dynamic quality of the building is undeniable, in its ability to accommodate humans within, without, above and below the structure. It does remain, as visualized, a hive of activity in the context of blazing architectural forms.

DUNELM HOUSE



CONCEPT

FUNCTION

CIRCULATION

SECTION

Dunelm House, The University of Durham

Durham, England

1965

The Architects Co-Partnership

(Bridge: Ove Arup)

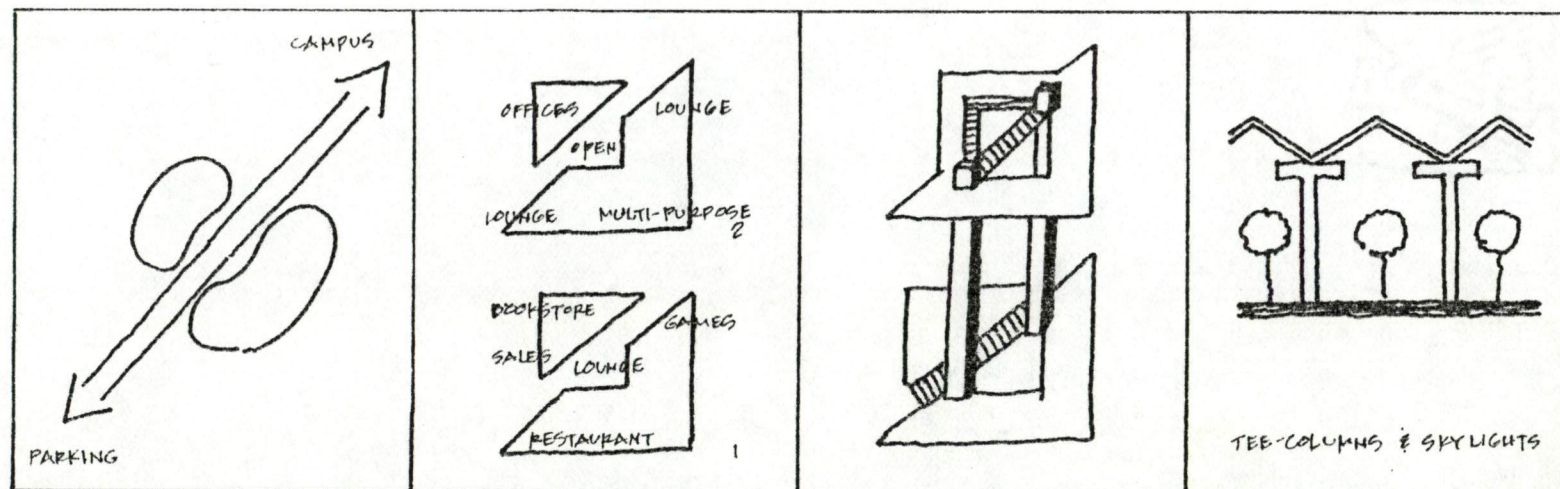
The Durhamn Union was to serve as a "Center of Gravity" for the campus and as an important foil to the regal Durham Cathedral across the river. All major congregating areas are planned with views to the city and to the Cathedral, with dining at the second level, student activities at the third and fourth, scattered administration and an auditorium adjacent to the lobby at the entrance level.

A long, linear stair at one side of the main lobby identifies the traditional circulation pattern of the building, with a primary horizontal corridor running at right angles to that stair at each floor. Exits are placed contiguous to the rising slope on each floor.

A standarized roof pitch follows the terraced sections of the building, all proportioned to complement the natural slope. The building takes the form of staggered and stacked concrete boxes with their back

ends embedded in the slope itself. Service volumes and equipment housing are disguised within each section, while maximum visibility and outlook is achieved for public use areas.

TRENTON STATE COLLEGE STUDENT UNION



CONCEPT

FUNCTION

CIRCULATION

ATRIUM

Trenton State College Student Center

Trenton, New Jersey

1978

Caudill, Rowlett, & Scott

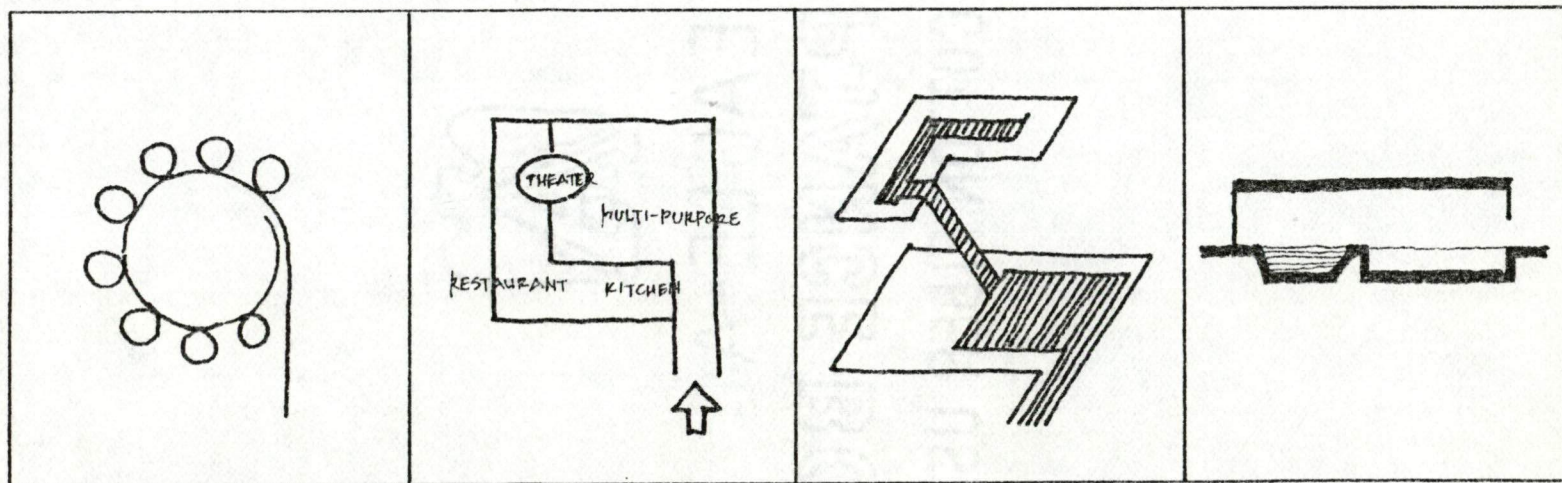
The Trenton State College Union straddles the main pedestrian route of the campus, dramatically fulfilling the community's desire for a building with a distinctly non-institutional character. In concept, two triangular sections are juxtaposed and joined by the strong linear building circulation generator. The Union is positioned halfway between the main commuter parking area and the academic center of the campus, and serves as the main point of distribution for the college.

The main lounge serves as the primary thoroughfare and connector of the two triangular functional areas. This lounge is skylighted, with skylights supported by integral concrete column-tees, freestanding in the lobby. The commercial spaces of bookstore and snack bar relate directly across the lobby, to recreational areas. The second floor functions as an office system and financial services, linked to quieter passive recreational areas.

Vertical circulation is generated by two grand staircases at either end of the central passage, cut 45° to the building. The skewed geometry of the central, two-story, interior court, allows easy access to all functional spaces which line the perimeter walls.

The building is beautifully constructed with a variety of materials, including cast-in-place concrete columns and beams, with clearly understood and harmoniously opposing planes of brick, detailed with wood and aluminum.

THE DRONTEN AGORA



CONCEPT

FUNCTION

CIRCULATION

SECTION

The Dronten Agora

Dronten, Holland

1967

Frank van Klingeren

The Dronten Agora of 1967 was conceived and planned with great care and sensitivity to the true functional needs and capabilities of the industrial suburb. At the same time, architecture was to maximize the possibilities for future change in program, as well as to reflect, serve, and reinforce the psychology of the townspeople and their sense of community identity.

In the embodiment of these ideals, the Agora was to be "a place to see the unknown activities of well-known friends, and well-known activities of unknown people." In the architecture, a "part of society was to be made visible." The vehicle for these ideals is a spacious central and enclosed square which serves as a meeting place and multi-purpose sports hall. A raised level within the square accomodates dining areas, and functions, line the central hall in a linear configuration, such that progress around

the perimeter of the central space comprises a complete experience.

A single entrance gives rise to the perimeter circulation. This entrance is separated from the street by a half-story; therefore the accessing to the building is a special event on the exterior, and once in the building, the total-view character of the architectural experience is instantly influential.

The cost of the Agora was halved by severely limiting separation of spaces, made possible by the long-span steel frame and glass curtain wall construction.

CASE STUDY RESEARCH:

Conclusions and Trends

Case study research has shown that it is somewhat unusual for athletic facilities to be combined with the social and food service functions normally associated with a student center. Few student centers are located on campuses that do not have a student population large enough to support a full athletic program which is serviced by a complex of athletic buildings, related to outdoor playing fields. The small college which does not have an athletic complex has a tendency to integrate student social areas and food services with other campus functions, illustrated best in the careful organization of services provided in single-structure community colleges. The concept of a specific center for student activities, combining food service, social areas and a fairly broad complement of recreational and athletic facilities is comparable to the large community center which serves a dispersed population.

Trends which are readily discernable in regard to the smaller scale

student center therefore tend to relate to the organization of large gathering areas in relation to groupings of smaller areas. Large areas are often defined as multi-purpose, large conference, auditoriums, dining halls and lobbies. Smaller areas include office blocks, small conference rooms, game rooms, lounges, sales concessions and study areas. As a general rule it can be said that the larger areas support the smaller area organization, either through the use of the basement space, or first floor area. At the same time, while social halls of great size are almost invariably placed as near to the ground entrance as possible, it does not follow that the heavy servicing required for food service dictate direct ground-floor access to dining facilities. Dining rooms are often placed as the terminus of a grand progress through the building. Sales concessions or private enterprises within the student center are almost invariably placed on the ground floor, adjacent to the lobby, in some cases to separate private service from the general student center service, in other cases to give maximum access to the commercial group from any casual entrance into the building. This is especially true when the building serves as an interior passage from one important part of the campus to another, a definite trend in overall campus planning.

Within the vertical organization of a student center, it is the rule that both private and student offices usually act as the end of the vertical spine, separated effectively from all other social or gathering areas. Movement in these areas is always more rigidly directed than in the social areas of the building, where emphasis is placed on several modes of circulation within different areas, or where passage through specific functional areas is an organizational imperative.

Community centers, on the other hand, place great emphasis on the visibility of administrative areas as the main generator of control for the whole building. Clarity is primarily achieved through the separation of athletic facilities within the enclosed structure, and a transitional zone or zones established in outdoor space related to both athletic areas and social areas. Separate and clear control areas must be established for natatoria, of course.

Current thinking concerning the character of the two separate functions of athletic facilities and social facilities has somewhat reversed. More gymnasium construction is now done with a goal of openness, lightness,

using natural filtered light. Conversely, the heavily glazed social centers are giving way to the building turned inward to central courts and atria, where a complex roster of activity areas are organized around a central and continuous vertical circulator.

CASE STUDIES: LESSONS IN PLANNING

Within the ideal conception of the Student Union building, there exists two overriding directives from which overall planning takes its shape. The first is the necessity for unobstructed invitation into the complex, into areas of maximum freedom. Freedom of activity, of movement, of perception. The highest ideal involves a complete vista of the fixed functional areas from the vantage the heart, or core of the complex. Ideally again, this heart becomes, in the psychology of the understanding of the University, the actual heart of the campus, the generator of activity not just in the Union but in the University as a whole. This is especially true when the Student Union is located midway between primary vehicular and pedestrian paths. Both Trenton and San Francisco Unions adhere rigidly to these ideal principles. What neither succeed in doing, however, is to fulfill the second ideal of easy transition from landscaped space to central meeting space. The Wilmington Community Center works perfectly in this regard, on a small scale, blending formal entrance, central meeting space and movement generator, and private outdoor activity space in one variegated

experience.

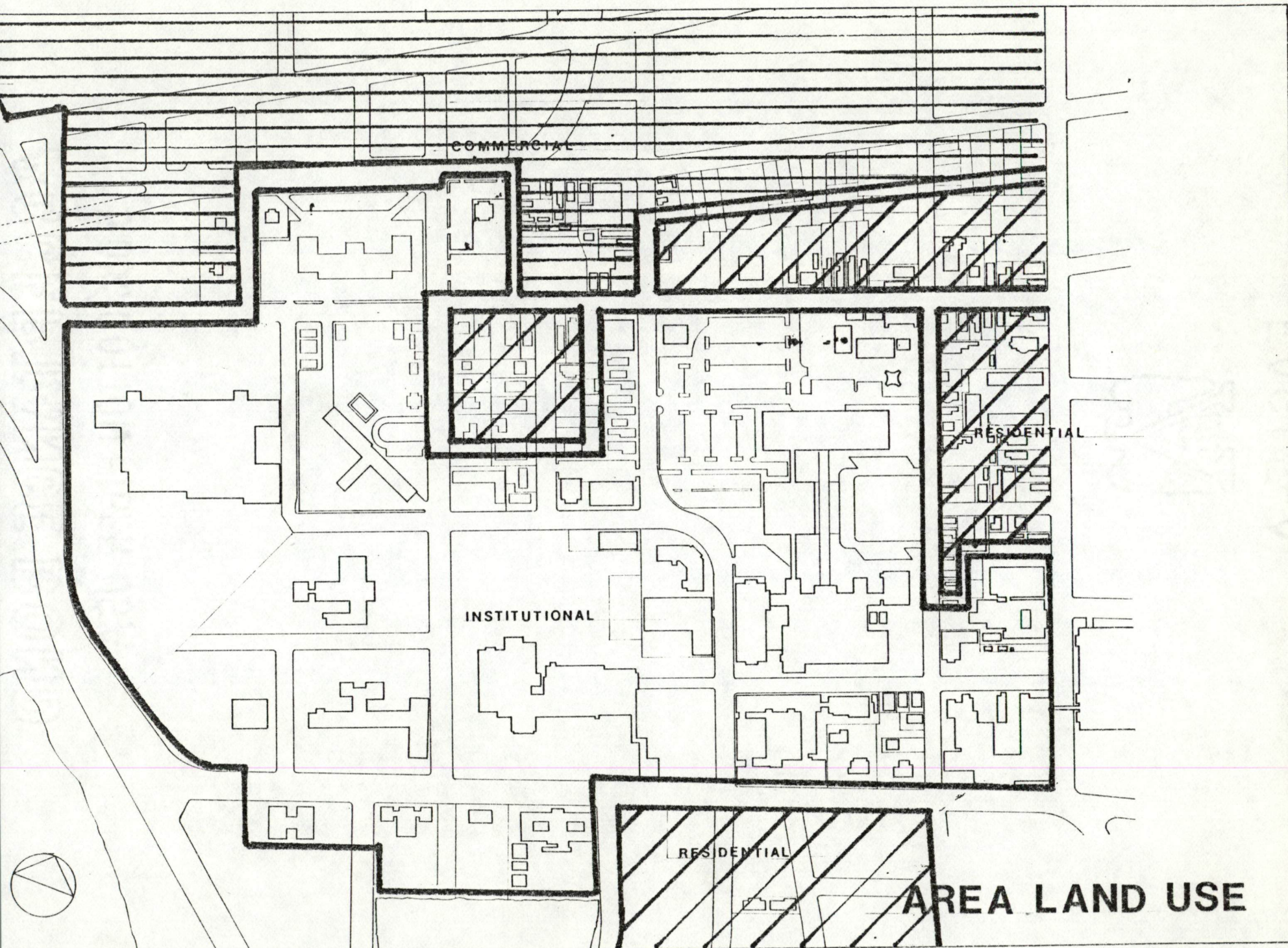
With regard to the usefulness of the large organizing social and meeting hall, Trenton provides proof of the need for an architectural construct imposed upon the basic freedom of the space. The symbolic forest developed through the use of freestanding columns in the Trenton Union lobby, ensures a variety of experiences and functional areas within the single volume. Openness is maintained while limits are imposed within that openness. In no other place within the Union building is the identification of the structural bay more appropriate, and in this identification the sense of proper groupings of humans becomes apparent. These groupings, even within the large space, have their uniqueness defined by the structure; nevertheless the flow of activity, one to another, remains electric and vibrant due to the high visibility of each activity.

Separation of functional areas demands careful study, within the building, and in terms of the relationship of the building to other campus buildings. Maximum adaptability of space should always be sought, even in presumably fixed office banks. There exists, simply, in the symbolic

construct behind the basic planning, the need to separate the mind and the body, the social from the athletic/recreational: in the transition from the one to the other rests the finesse in the overall planning effort. The connection may stem from the humble element of circulation, or be developed on higher planes of light transmission, color mapping, or internal vistas. The Union building more often than not demands the harmonious marriage of disparate elements, elements of function, of volume and therefore of form, of movement and of service. In these demands are further found the desire of every community for an embodiment of the highest human spirit. This desire began with the Cambridge Union, the first Union, and has persisted, proof of its elemental nature. In most Universities the community has made the strenuous effort to give physical reality to an attitude, a spirit, a hope; this effort is analogous to the effort by a communities to develop ecclesiastical architecture which reflects their own principles and inspires their maintenance. Within the context of a University, the demand for the Union building which reflects and inspires, more often than not distinguishes the structure from all other structures in the sphere of the University. This imparting of the human quality to the building, becomes

the most difficult planning and detailing objective within any Student Center project.

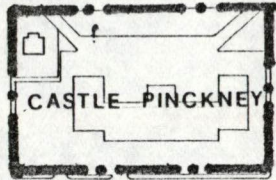
ANALYSIS



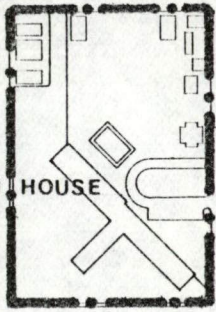
AREA LAND USE



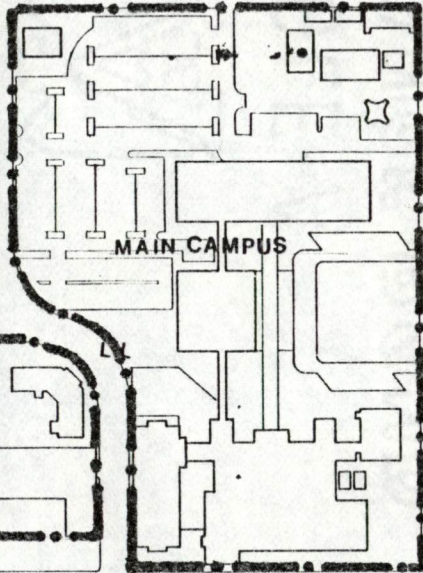
PROPERTY OPTIONS



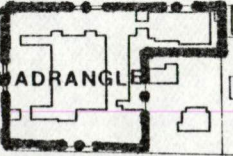
CASTLE PINCKNEY



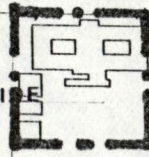
ALUMNI HOUSE



MAIN CAMPUS



OLD QUADRANGLE

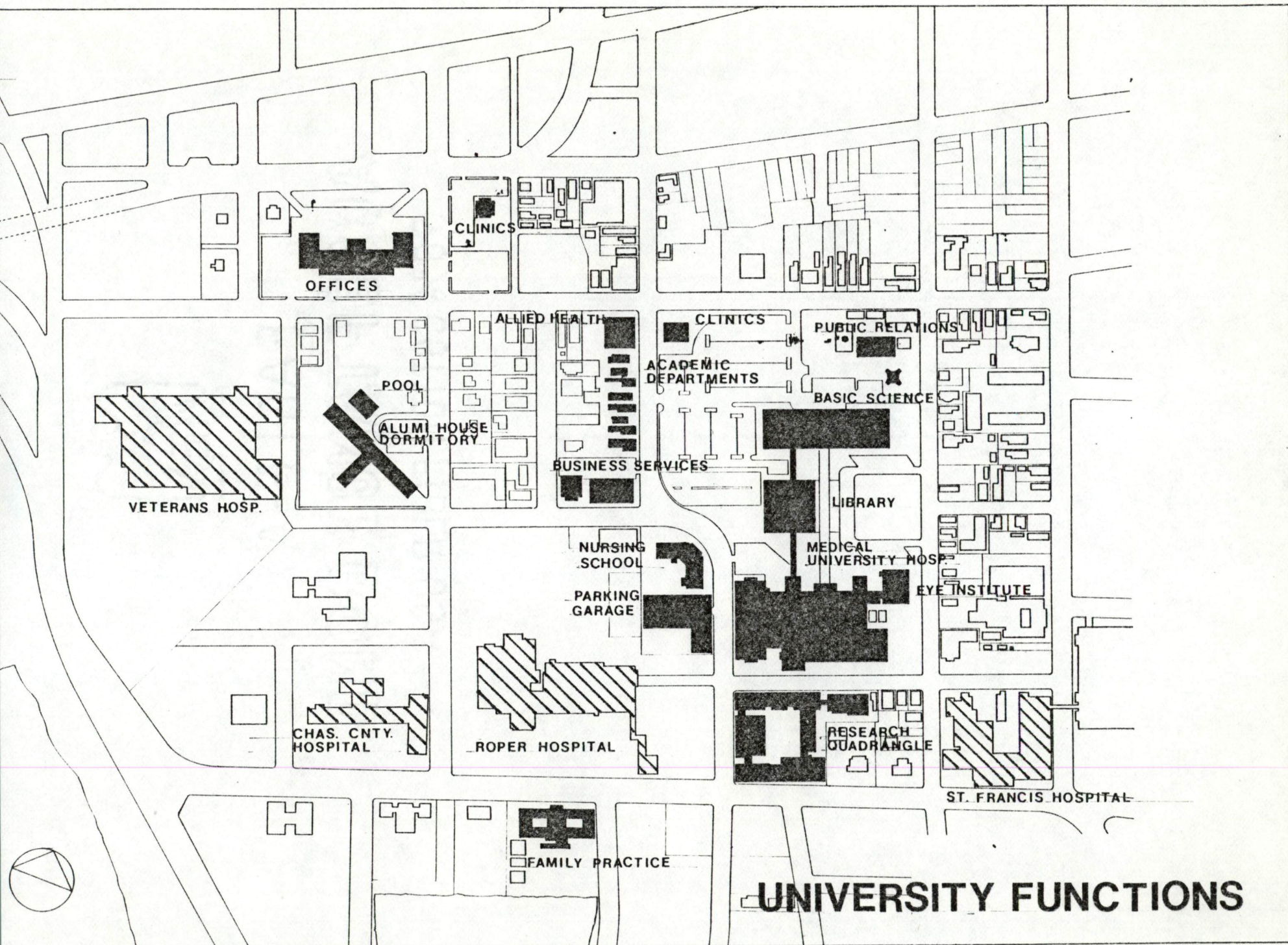


RIVERSIDE



UNIVERSITY PROPERTY





CIRCULATION

Vehicular traffic rings the Medical University property on the heavily travelled roadways of Route 17, the Crosstown Expressway, Calhoun Street and Ashley Avenue. Intermittently heavy daytime traffic occurs on Courtenay Street, cutting the University property in two during peak traffic hours. Light traffic occurs on Bee, Doughty, and President Streets, all of which pass through the campus. Traffic flow is effectively stopped on Mill Street in order that it may be used exclusively by emergency vehicles servicing the Hospital. University personnel park in a number of areas within and surrounding the site, the largest being the Main campus lot for 500 cars. Parking is also leased in the Hagood Lot north of the Crosstown Expressway.

Primary pedestrian travel occurs through the formal axis of the new quad at ground level and via the pedestrian overpasses connecting the Basic Science Building with the Library, and the library with the Hospital, and on through the Old Quadrangle. This flow is intersected at right angles by the clear entrance path to the Library from Ashley Avenue, through the landscaped park enclosed by the buildings. Considerable pedestrian flow

follows Doughty Street along insufficient sidewalks, from the Main campus to the Alumni House, and/or further to the Veterans Administration Hospital. The library functions as the primary pedestrian focus and pivot.

Bicycle routes follow a primary route from the peninsula south of Calhoun, northward on Ashley Avenue and Gadsden Street. Bus lines occur on all major perimeter routes.

TO ASHLEY RIVER BRIDGE

ROUTE 17

CANNON

BEE

COURTENAY

EARHARDT

PRESIDENT

DOUGHTY

MILL

CALHOUN

ASHLEY

RUTLEDGE

LOCKWOOD

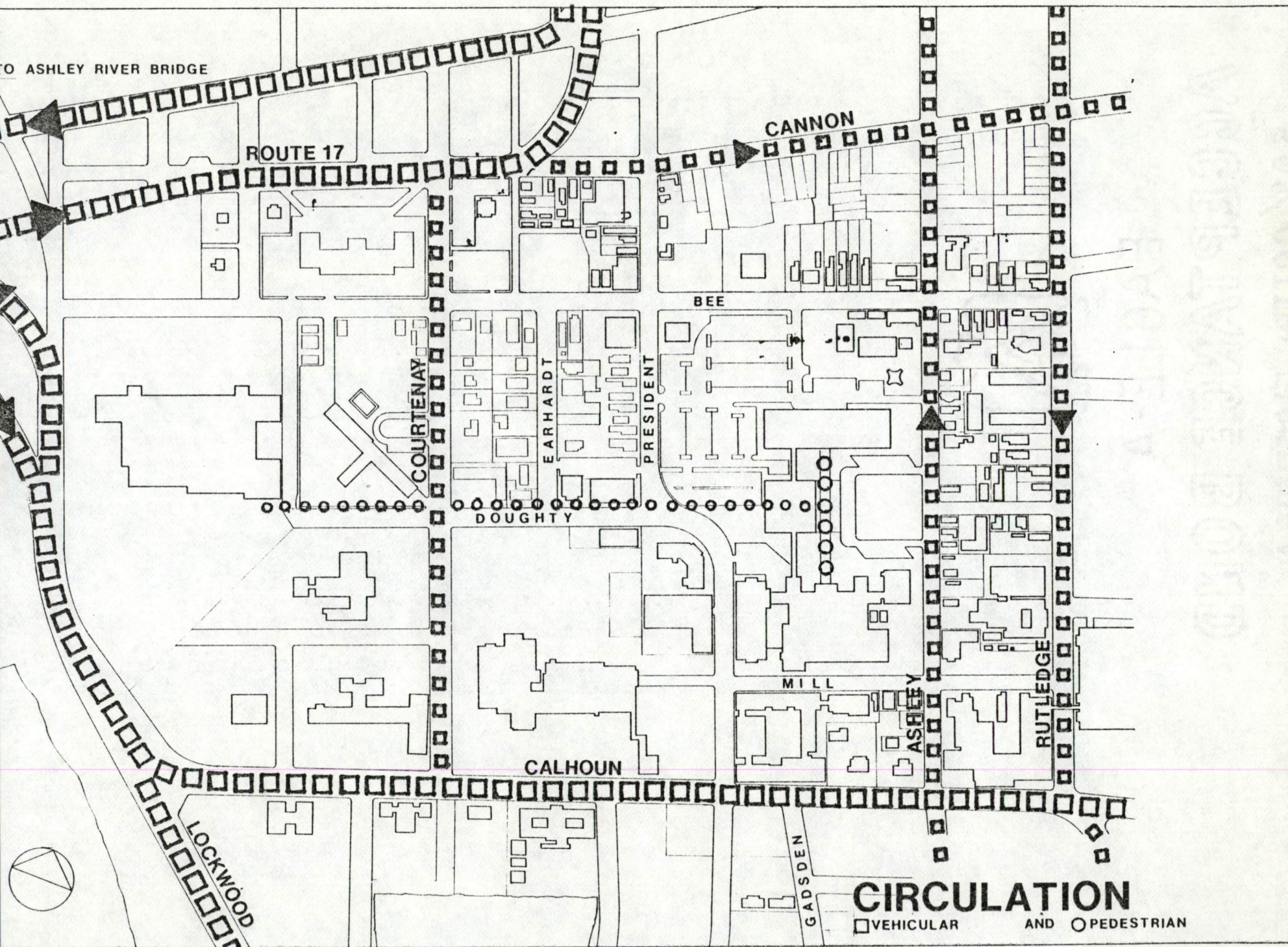
GADSDEN

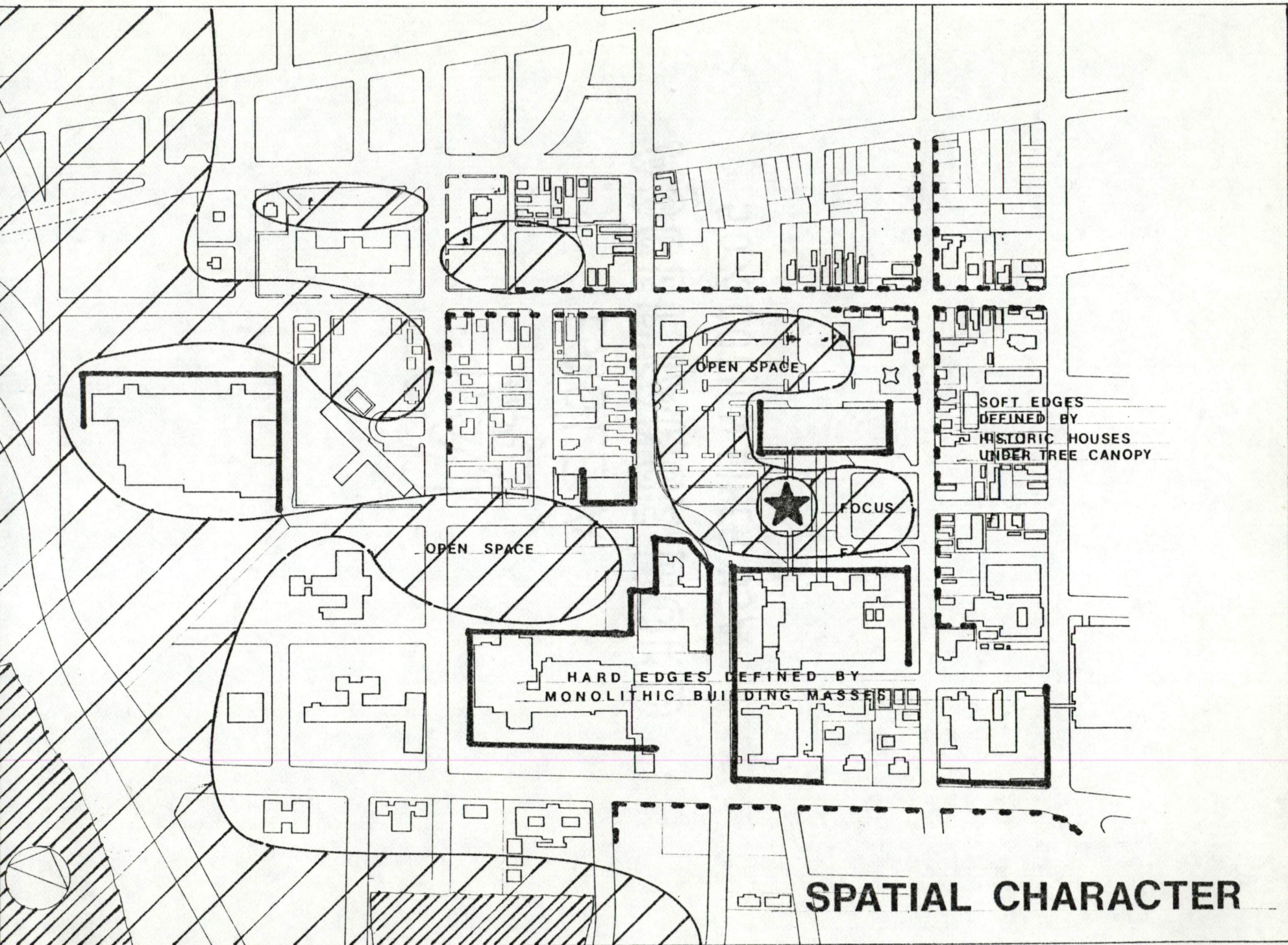
CIRCULATION

VEHICULAR

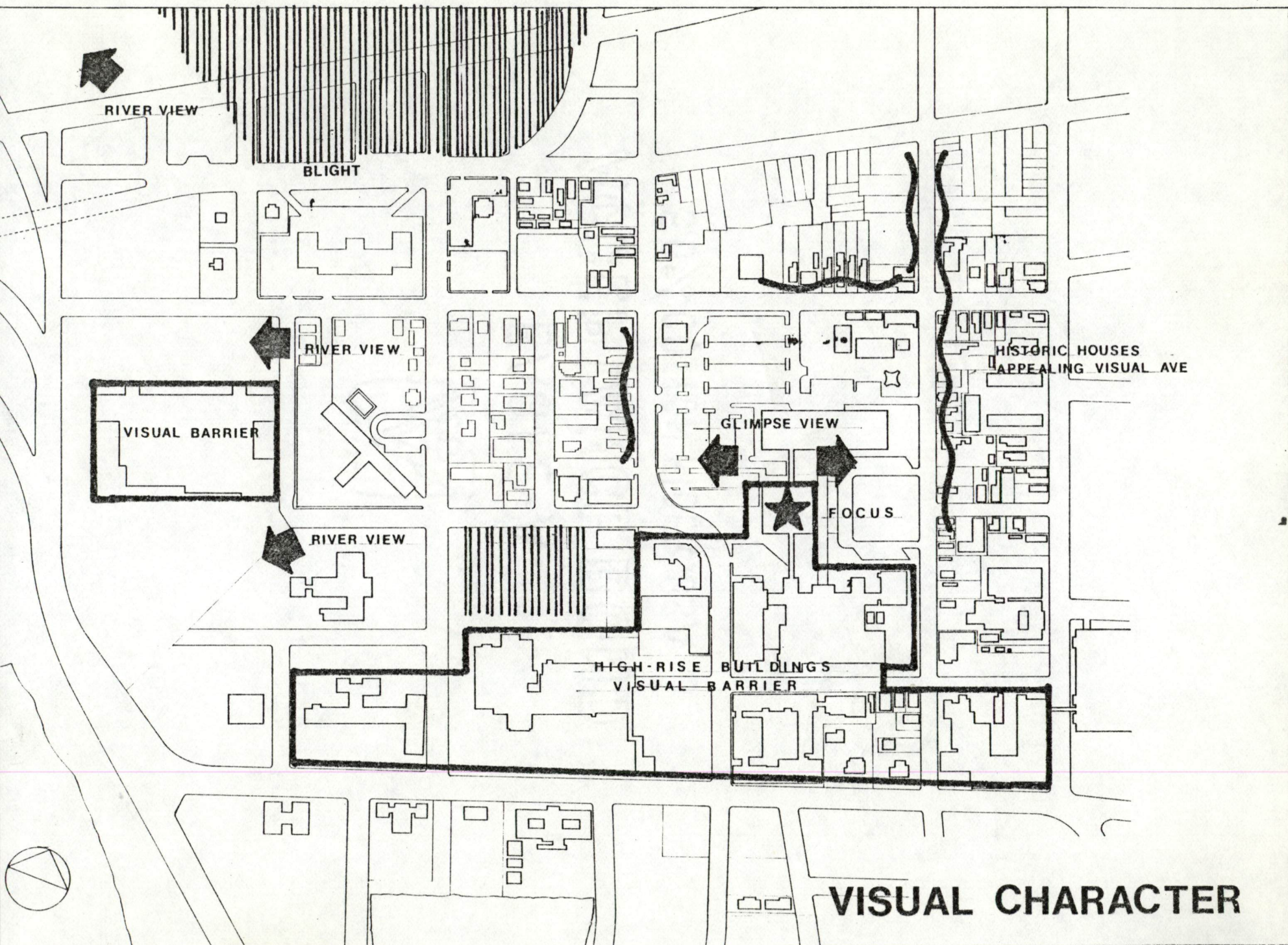
AND

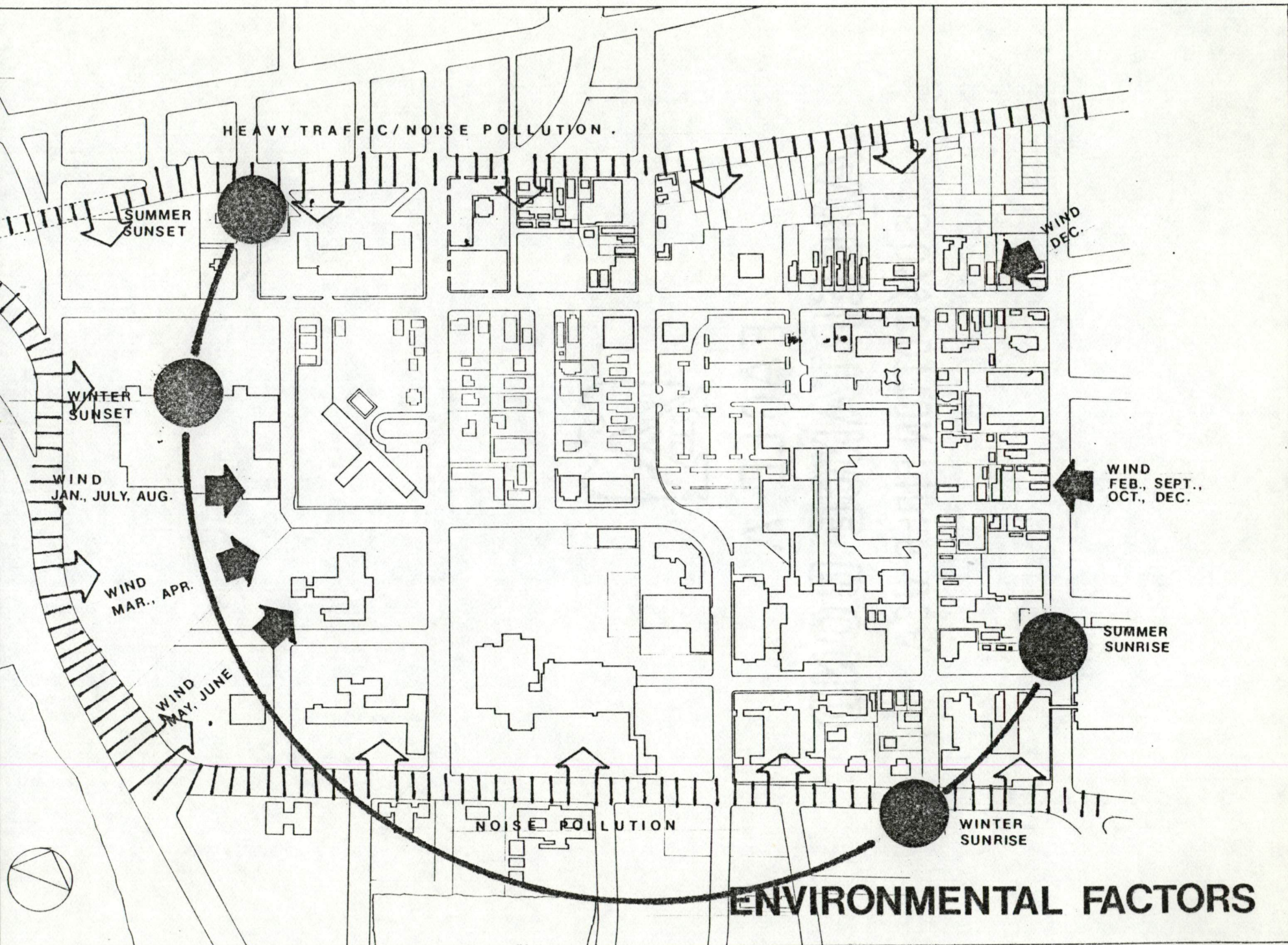
PEDESTRIAN





SPATIAL CHARACTER





BUILDING DESIGN

THE MASTER PLAN OF THE MEDICAL UNIVERSITY

The Medical University of South Carolina undertook in 1979 a re-formulation, or revitalization of planning concepts first proposed in the mid 1950's. Long-range goals and directions have indeed changed considerably during the interim period of twenty-five years. The University contracted with the Washington, D.C. firm of the Perkins and Will Partnership to develop a Master Plan which would carry the University through the years of great expansion in size of both academic community and physical plant. Land originally allotted to the University has long since been used for the basic University hub of the Hospital, and Research Building, the Library and the Basic Science Building, (housing the Dental and Medical Schools). Re-development of the two westernmost properties of the campus, Alumni House Dormitory and the Castle Pinckney sites, immediately point to the necessity for University acquisition of the properties which separate these western sites from the main campus. Thus, the Master Plan is predicated on the assumption that the University will acquire all lands bordered by Bee Street and Doughty Street on the North and South, and Courtenay Street and President on the West and East.

Guidelines were furnished to the University officials by Perkins and Will in August of 1979. These recommendations include the following:

1. The old quadrangle buildings shall be demolished subsequent to the relocation of functions presently housed in those buildings. These functions include research areas, clinical adjuncts to the Hospital and Medical School, and teaching areas. This important site shall be developed for functions closely allied to the hospital and Clinical Science Buildings. Options which have been considered are temporary surface parking, a multi-level parking garage, and a combination of parking structure and clinical space.
2. The College of Pharmacy, presently housed in the Old Quadrangle, would be retained on the same site in a new building, or would be moved to a new building attached to the new East-West Research spine.
3. The College of Nursing shall be moved into a new structure in the academic zone. The present structure at the bend in President Street shall be demolished or renovated into student housing.

4. Student Housing of a dense character shall occupy the present Alumni House site after 1985, when the Alumni House itself would be demolished.

5. The Castle Pinckney Motel, (the "least appropriate building on campus"), shall be demolished unless it is renovated into student housing. If demolished, the site shall be developed for "general support facilities."

6. Colcock Hall, the small building on Ashley Avenue adjacent to the Basic Science Building, shall be temporarily used as expansion space for the College of Dental Medicine. It would subsequently house the offices of the President of the University and Administrative personnel.

7. An east-West spine shall be developed from the Basic Science Building, connecting academic buildings as they are developed.

8. A new structure adjacent to the existing Allied Health Building shall accomodate functions now housed in the Castle Pinckney Motel.

The Allied Health Building itself is not recommended for vertical expansion due to structural insufficiency.

9. New structures adjacent to the new Business Services Building shall house the Graduate School, the Department of Continuing Education, and other support functions needing direct access to the Library and Hospital.

10. Functions now housed in the Summerall Center, a high-rise across Route 17 Crosstown Expressway, shall continue on a rental basis until 1985.

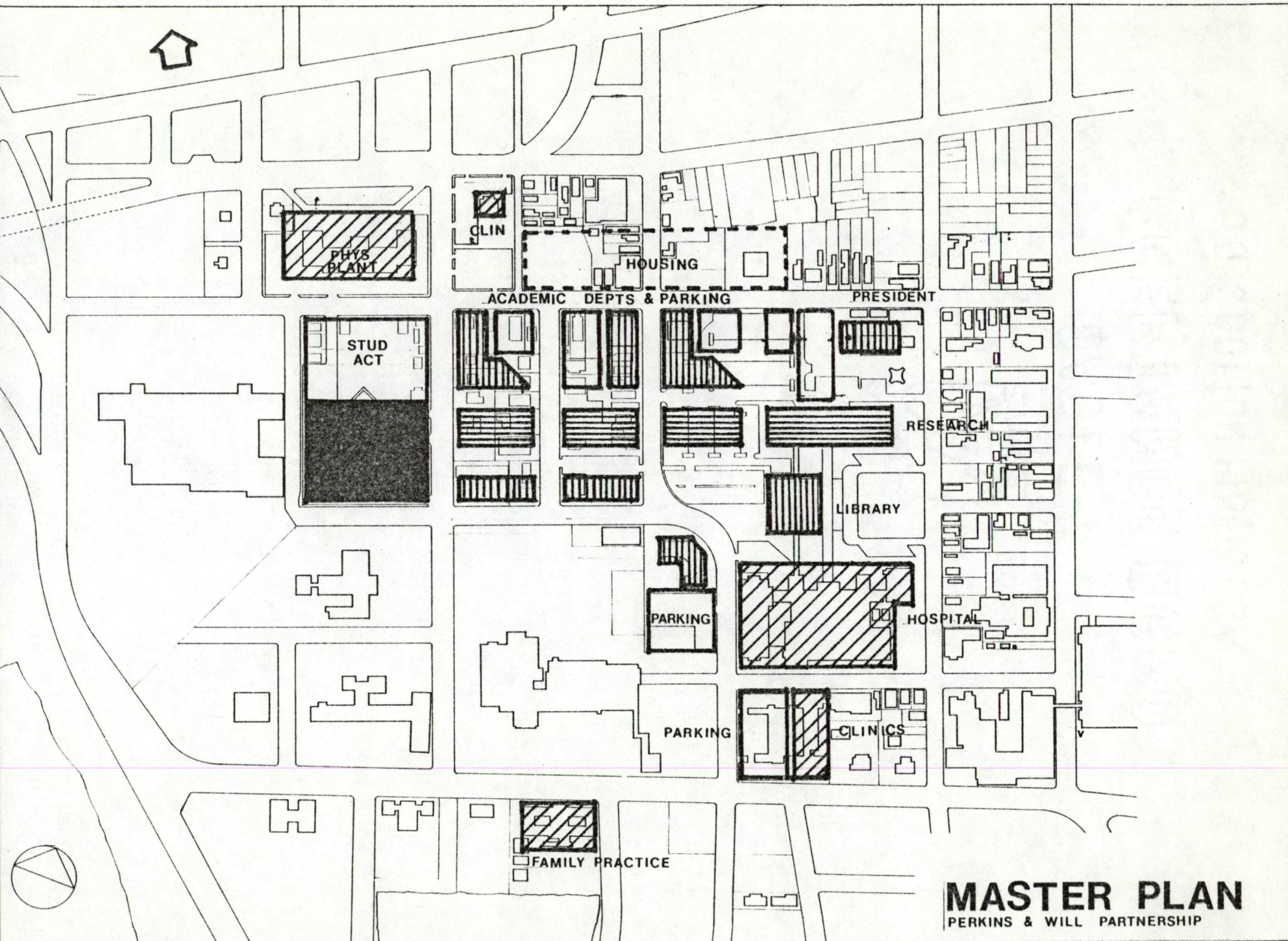
11. A new Physical Plant Building shall be constructed within the Support zone.

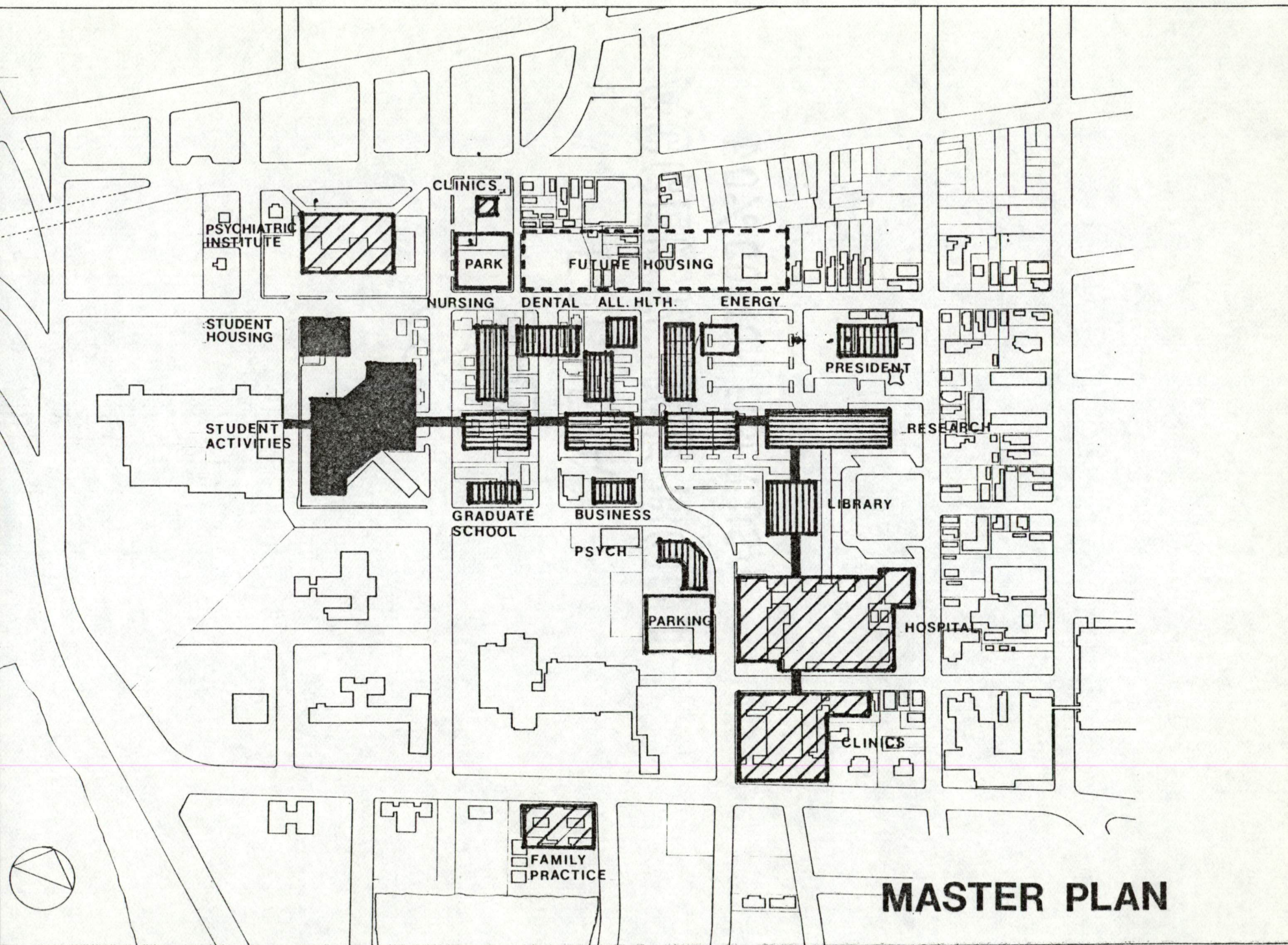
12. An additional floor added to the existing Basic Science Building shall house the Laboratory Animal Sciences Department.

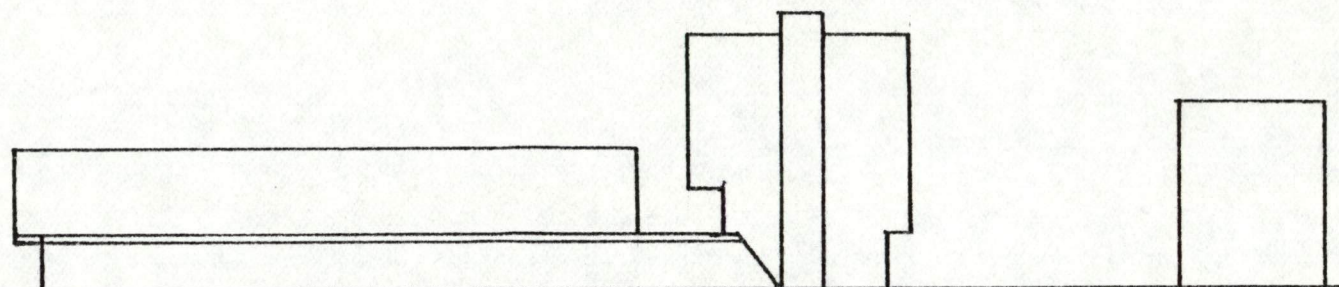
13. Parking shall be developed along the periphery of all presently owned and acquired properties.

14. All land bounded by Doughty, President, Courtenay, and Bee Streets shall be acquired by the University.

15. A psychiatric Institute shall be developed within the campus proper.



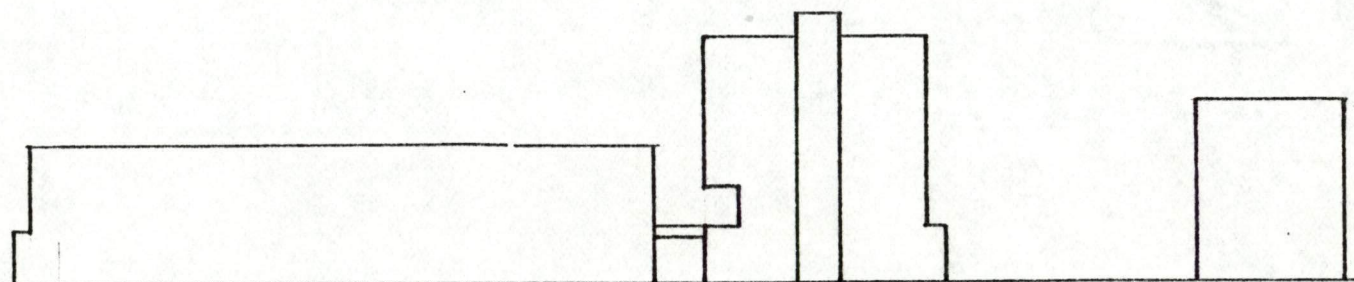




NURSING SCHOOL
PARKING

RESEARCH

GRAD. SCHOOL



NURSING SCHOOL

RESEARCH

GRAD. SCHOOL

SECTIONS

RESEARCH SPINE & ACADEMIC DEPARTMENTS

MASTER PLAN CONCLUSIONS

Certain basic concepts and specific recommendations by The Perkins and Will Partnership are accepted in their original form. These include the following:

1. The campus shall be developed West, from Basic Science to the Alumni House Dormitory, creating a second axial relationship, perpendicular to the original Hospital-Library-Basic Science axis. This second axis shall begin at the Library and terminate at a new structure on the Alumni House site, the Alumni House being demolished by 1985.
2. Future schools within the total University shall be developed adjacent to a research spine extending westward from the existing Basic Science Building. This College-Research development shall insure the proper relationship between research and the individual disciplines.
3. Primary pedestrian movement through the campus shall be reinforced

by a promenade, walkways, etc., the progress of the University westward.

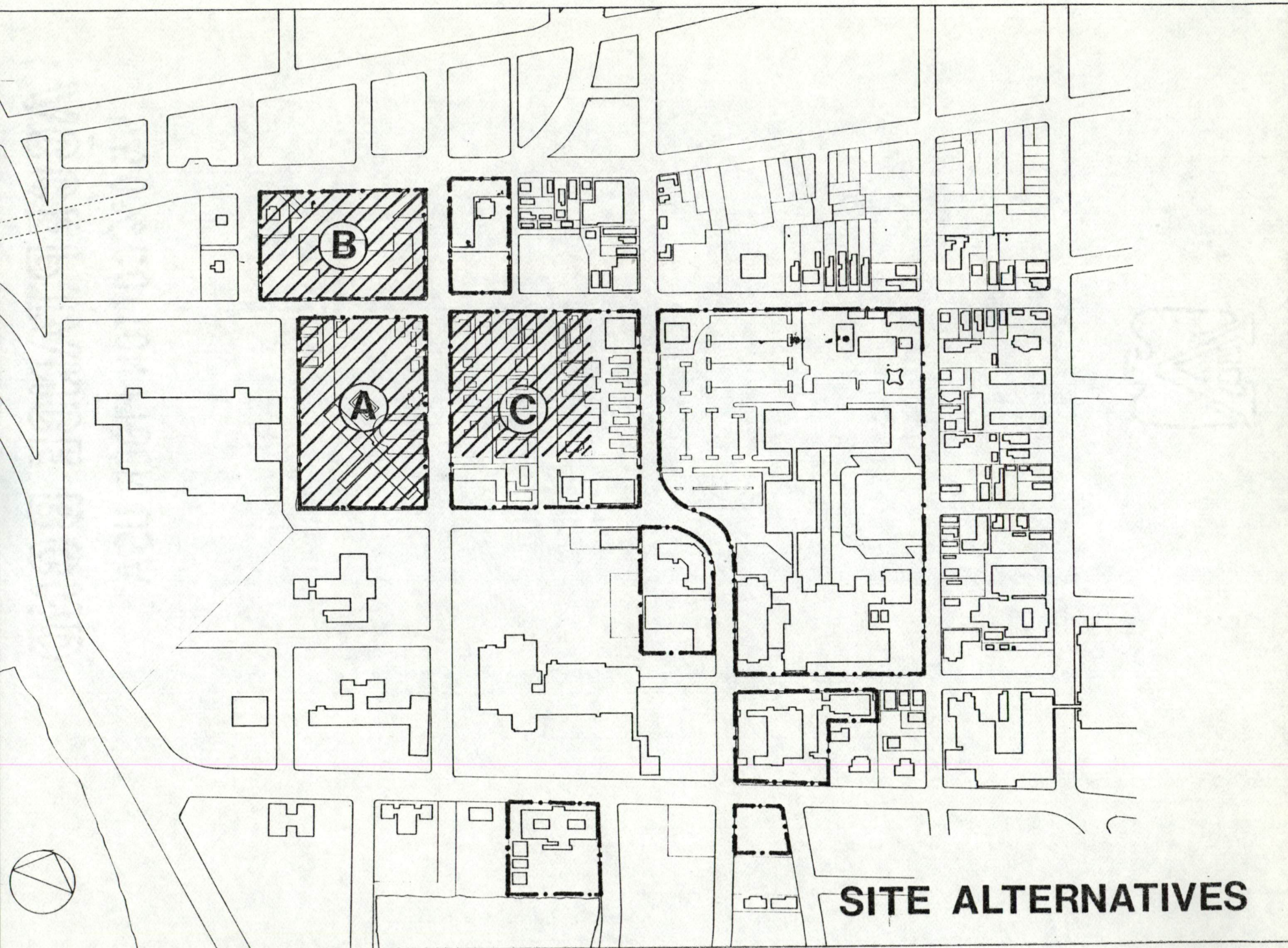
4. Student Activities shall be phased into the Master Plan after demolition of Castle Pinckney and the Alumni House. Student activities shall be closely allied with University housing.

This project proposes a Master Plan based upon the generalities outlined above, with specific recommendations as follows:

1. A continuous movement spine shall proceed from the Old Quadrangle buildings, through the Hospital and on to the Library, Basic Science Building, Research Spine, through the Student Activities zone and terminating at the Veteran's Administration Hospital.
2. The Old Quadrangle Buildings shall be preserved in their Neo-Classical Revivalist elegance, and further developed as clinical adjuncts to the Medical University Hospital.

3. Parking for students, staff, and employees of the University and Hospital shall be highly and densely developed in structures more directly adjacent to Route 17 and the northernmost properties of the University. Limited, reserved parking shall be developed in small pockets, close to individual buildings. The existing parking garage shall be used primarily as public, revenue-producing parking, directly opposite the Clinical Tower and the Hospital.
4. The core of the campus shall be comprised of an East-West axis, with the Library and the formal visitor entrance at one end, the Student Center at the other, and enclosed between the two, the vine of the Research Buildings with their leaves of the individual academic colleges, Nursing, Dental, Medicine, Pharmacy, Allied Health. The whole shall be linked by a second floor, continuous pedestrian walkway. Business Services, the Graduate School, and Continuing Education shall form the southern edge to this core, residential development the northern edge.

5. The Psychiatric Institute shall be located at the edge of Route 17 on the Castle Pinckney site, as proposed by the University in mid-1980.
6. The President and other administrative services shall be located in the period buildings in the Colcock Hall area, separated from the colleges only by surface parking and a new Energy facility, centrally located at the juncture of the two University axes.



SITE ALTERNATIVES

SITE ALTERNATIVES

Despite the basic logic of the current master plan, three sites are presented as possible locations for the Campus Center. Each site has been or is currently under consideration as the appropriate location for the Center. A local architectural firm had actually designed a student center, situated in the area of closest proximity to the existing library. This building was, however, rejected by the University.

Site A, or that site favored by the current master plan is comprised of 240,000 square feet of filled land.

The positive aspects of the site include its situation as the terminus of the proposed "shaft of space" of the pedestrian promenade. The site is presently University owned, with University utility connections already in place. Alumni House is scheduled for demolition by 1985. The site is both the natural boundary at the western limits of the campus as well as being a strong image-maker from the western entrance to the city, the elevated roadways of the Ashley River Bridges. The site would be able to make advantage of several river view

as well as the direct view back into the heart of the campus, toward the focal point of the Library.

The negative aspect of the site's proximity to the monolithic and overpowering structure of the Veteran's Administration Hospital is outweighed by the advantages of that proximity, inasmuch as presently the heaviest University pedestrian traffic occurs throughout the day along Doughty Street from the existing quadrangle on Ashley Avenue to the VA Hospital. Heavy vehicular traffic does split the site from the main body of the campus. Only part of the site would be available for Student Center construction.

Site B, formerly known as the Castle Pinckney site, favored by the University in 1979, is the largest site available, comprising 176,000 square feet of filled land. The whole of this parcel would be available for the student center construction.

This site is also University owned with utility connections in place.

Its place as an image-maker for the University from the western entrance to the city is even more pronounced than with Site A, and its

location would enhance the linkage of the campus to any future development that might occur across Route 17, at Brittlebank Park.

Negative aspects include its remoteness from the campus center, and its location within Planning Unit # 2, or the commercial strip development of the Crosstown Expressway. Future encroachment by a reworked Expressway would be likely, and site development at this location would necessarily take into consideration extreme setbacks from the street and loss of usable land. Site B would suffer more than any other location within University property, from air and noise pollution generated by the constant heavy traffic of the Crosstown Expressway. Its very remoteness, and proximity to a section of the city that has been "transitional" for two decades, signals security problems. Travel to the site from the logical axes proposed by the current master plan being circuitous, and community perception of the site as dangerous at night, further point up the negative aspects of the site as a location for the Student Center.

Site C, comprised of a part of land bounded by President and Courtenay

Streets, would be the smallest site available.

This site is equidistant to all hospitals and would be within the campus proper, though the land would have to be acquired by the University. Security would be part of general campus security. The location of the Student Center on this site would insure its closest proximity to planned low-rise housing on the north side of Bee Street. Appealing vegetation covers most of the area.

The site has been previously rejected by the University as a location for the Center, and its use for the project would completely disrupt the master plan concept of the generation of the academic colleges from the East-West research spine.

MEDICAL UNIVERSITY OF SOUTH CAROLINA

Site Description

The Medical University is encompassed by Calhoun and Cannon Streets on the South and North, and Ashley Avenue and Lockwood Boulevard on the East and West. The main quadrangle and departmental areas are located on original peninsular land. Marsh fill of the 1950's comprises the western parcels. In these western lots the soil conditions are less stable and require careful analysis. The university properties are bounded on the North and South by the primary cross-town vehicular arteries of the city, causing noise and traffic pollution along these thoroughfares. Surrounding non-University owned buildings, but ones which contribute heavily to the scale and character of the Medical Complex are the Veteran's Administration Hospital, Roper Hospital, McClellan-Banks Hospital, the St. Francis Hospital, and the Charleston County Hospital and Health Department.

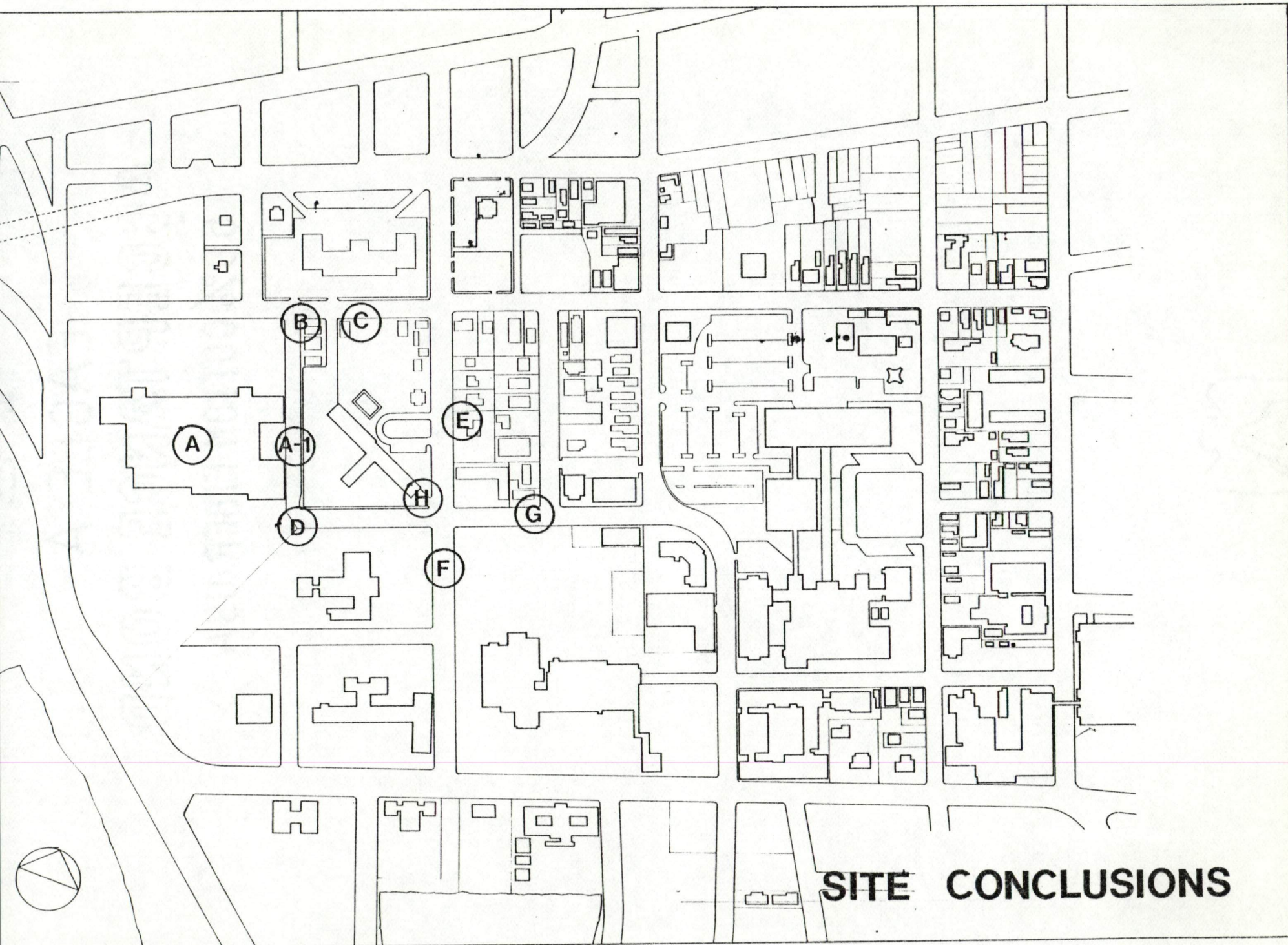
As approached from the Ashley River Bridge entrance to the Peninsular City, the Medical Complex is clearly outlined by its towering masses.

From the access bridges, the skyline of Charleston is increasingly dominated by the monolithic red and gray masses of the hospital buildings. The complex is not only vertically overpowering, but from many vantage points, individual buildings appear to merge into a continuous horizontal mass. Besides the landmarks of the church spires, which clearly define the city neighborhoods, few other structures dominate the city skyline as do those of the Medical Complex. The buildings which do tower above the historic districts include the Francis Marion Hotel, the Dockside Condominium Project, and several high-rise apartment buildings scattered along the West flank of the peninsula. Ongoing highrise infill and expansion continues to reinforce the massive expression of the Medical Complex. The transition from the Medical Complex monolith to the historic residential surrounds occurs immediately and with few buffer zones. Considerable adaptive reuse of these older buildings occurs in some of these in close proximity to the Medical Complex and throughout the City, providing relief from the newer high-rise buildings, all of which are devoid of architectural merit.

The Medical University property is split in its center by a one and

one half block area of one- and two- story office buildings, single homes and small apartment buildings. These buildings are shaded by the only tree canopy in the area. To the West of this block is University housing, Alumni House. Office space is housed on the westernmost parcel of University-owned property, in the dilapidated Castle Pinckney Motel. The Main Quadrangle of the campus, entered from Ashley Avenue through formal landscaping, is formed by the focal Waring Library, flanked by the high-rise Basic Science Building and the ten stories of the Medical University Hospital and adjacent Clinical Sciences Building. All land behind the quad is currently used for surface parking. Clinical space is also accomodated in the "Old Quadrange," or the original University buildings constructed on the present site. This Quadrangle includes the College of Pharmacy and the Baruch Auditorium. Other facilities within the main campus include the Nursing School and adjacent parking garage, the Business Services Building and the Allied Health Sciences Building, all on President Street. A Group of historic frame structures containing academic departments exists between the high-rise Business Services and Allied Health Buildings. Outside the limits of the main campus is the Family Practice Center on Calhoun Street, and leased offices in the new

Summerall Center, north of the crosstown expressway. The University has the option to acquire a considerable amount of prime river front property just north of the Crosstown Expressway in the area called Brittlebank Park.



SITE CONCLUSIONS

SITE ANALYSIS CONCLUSIONS

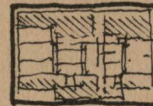
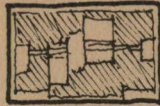
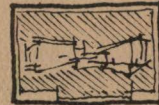
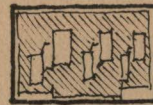
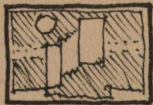
Site A, or the Alumni House block, delineates at its western edge the western boundary and limit of the University. This boundary is forcefully defined by the monolithic six-story structure of the Veterans Administration Hospital (A), and its extensive lowrise ancillary additions. This building is composed of a conglomeration of materials, from the original gray brick skin to the newest additions of metal building elements. This hard edge is separated from Site A by a service road. As one travels north along this service road (A-1), one moves through the compressed space to be released at the intersection of the service road with Bee Street. Here, at the northern end of Site A, a continuous vista opens to the Ashley River across the landscaped entrance lawns of the VA Hospital.

From a second story vantage, two other vistas open to the river, the first (C) across the Castle Pinckney site, across the Crosstown Expressway to Brittlebank Park, the site of possible future development of the University; the second, across the Veterans Administration Hospital parking lots to the southwest of Site A, between the VA and the lowrise

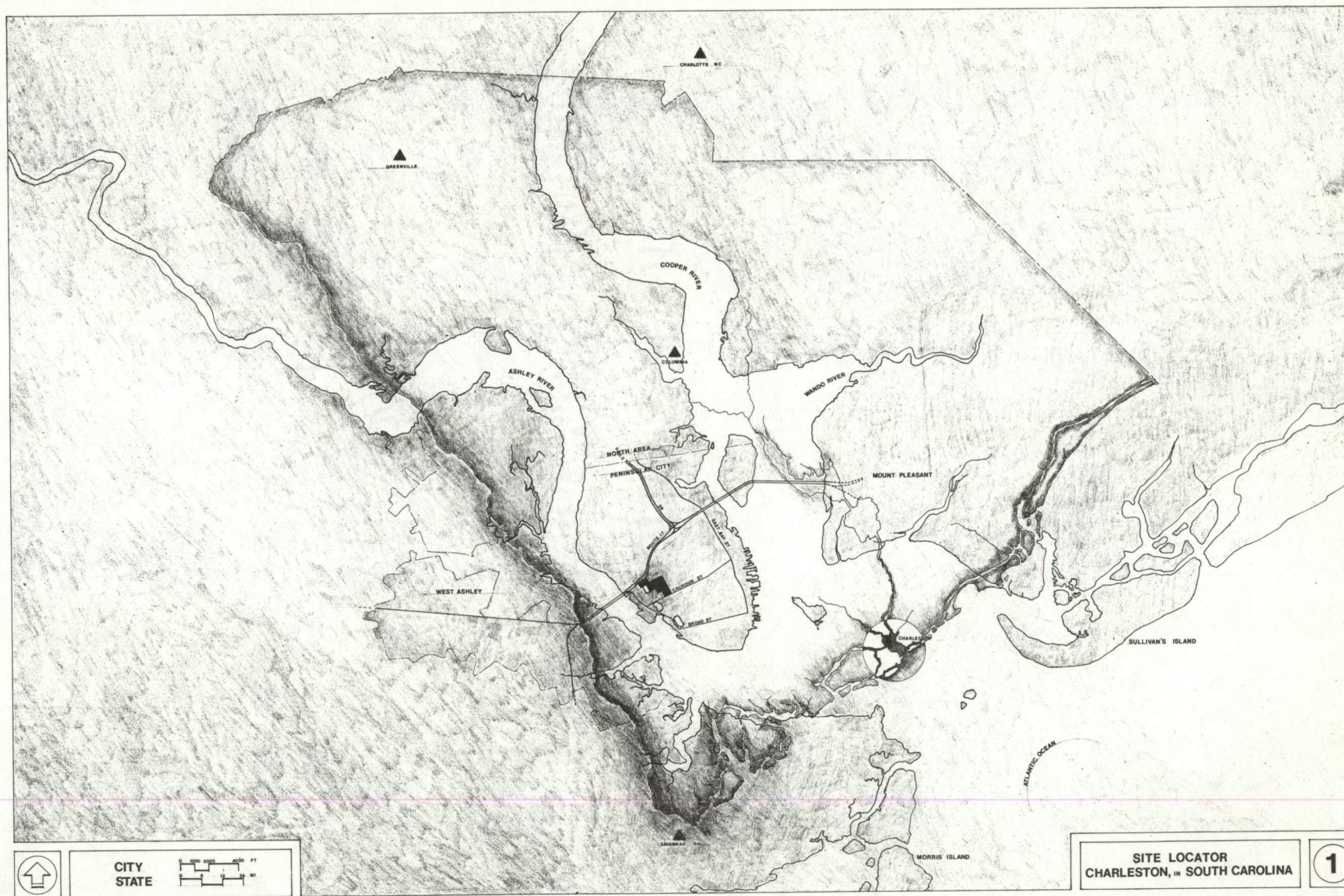
McLellan-Banks Hospital (D). A soft edge occurs along the east side of Courtenay Street. This edging (E) is derived from the heavy canopy of live oaks which rise above several small single story houses. Courtenay Street itself, (F) is the source of considerable noise and air pollution with its intermittently heavy traffic flow connecting the major arteries of Calhoun Street and the Crosstown Expressway. The County Emergency Room is located at the southern end of Courtenay Street, adding to the sometimes frenetic quality of the street. The separation of Site A from the campus proper is ameliorated by the direct visual link with the Waring Library, down Doughty Street and across the face of the Business Services Building. This visual link (G), and the established pedestrian movement patterns back and forth along Doughty Street, reinforce the focal quality of the southeastern corner of Site A (H). This linkage, considered with the proposed movement of community members from University parking and other functions above Route 17, creates the need for the development of this portion of the site with strong elements of visual identification. The northwestern corner, (B) has similar characteristics and demands similar treatment, in its role as a focal point from the elevated roadways of the Ashley River bridges as

they enter the peninsula from the West. Traffic in these areas, directly facing the site, is steadily decelerating as it nears Lockwood Boulevard. In the one corner the image of the University is reinforced from within, in the other from outside.

An easy relationship exists between the northern end of the property and the Castle Pinckney site, across Bee Street. The street separating the two is little used in comparison to other neighborhood streets, servicing primarily the public side of the VA Hospital. Of all properties adjacent to the Site A, the Castle Pinckney site exists in most comfortable relationship with Site A. The existence of this University owned property, and its role as a strong buffer against the Crosstown Expressway, further serves to integrate Site A within the body of the main campus lands, and to protect Site A and its northern edge from the insecure zone of development at the highway edge. In the absence of soft edging in this direction, the Castle Pinckney site and the motel itself, form a soft edge for Site A. The heart of the site itself is featureless, filled land with an occasional palmetto. Passage across this heart to the VA Hospital must be developed.

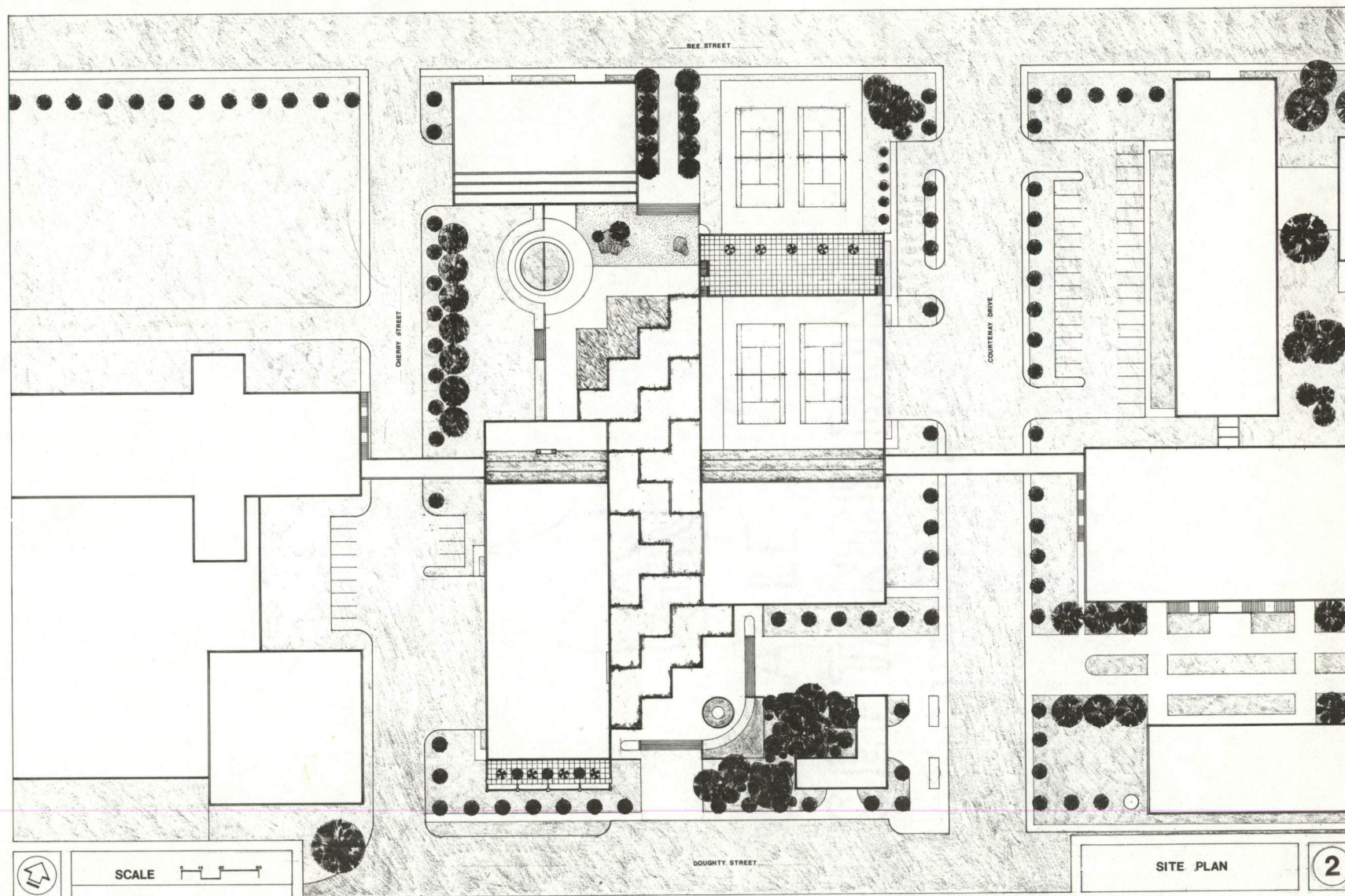


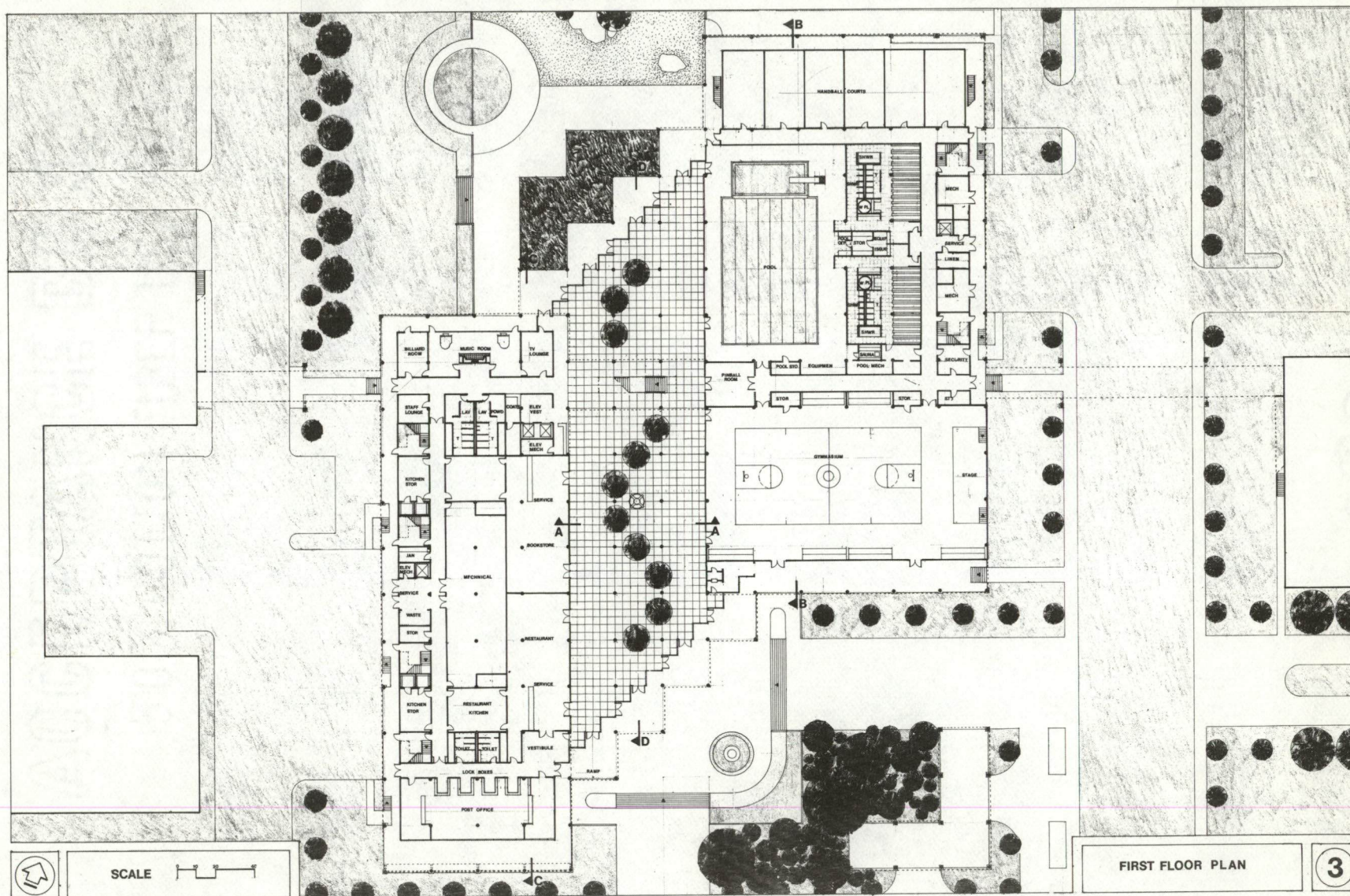
THE BUILDING DESIGN



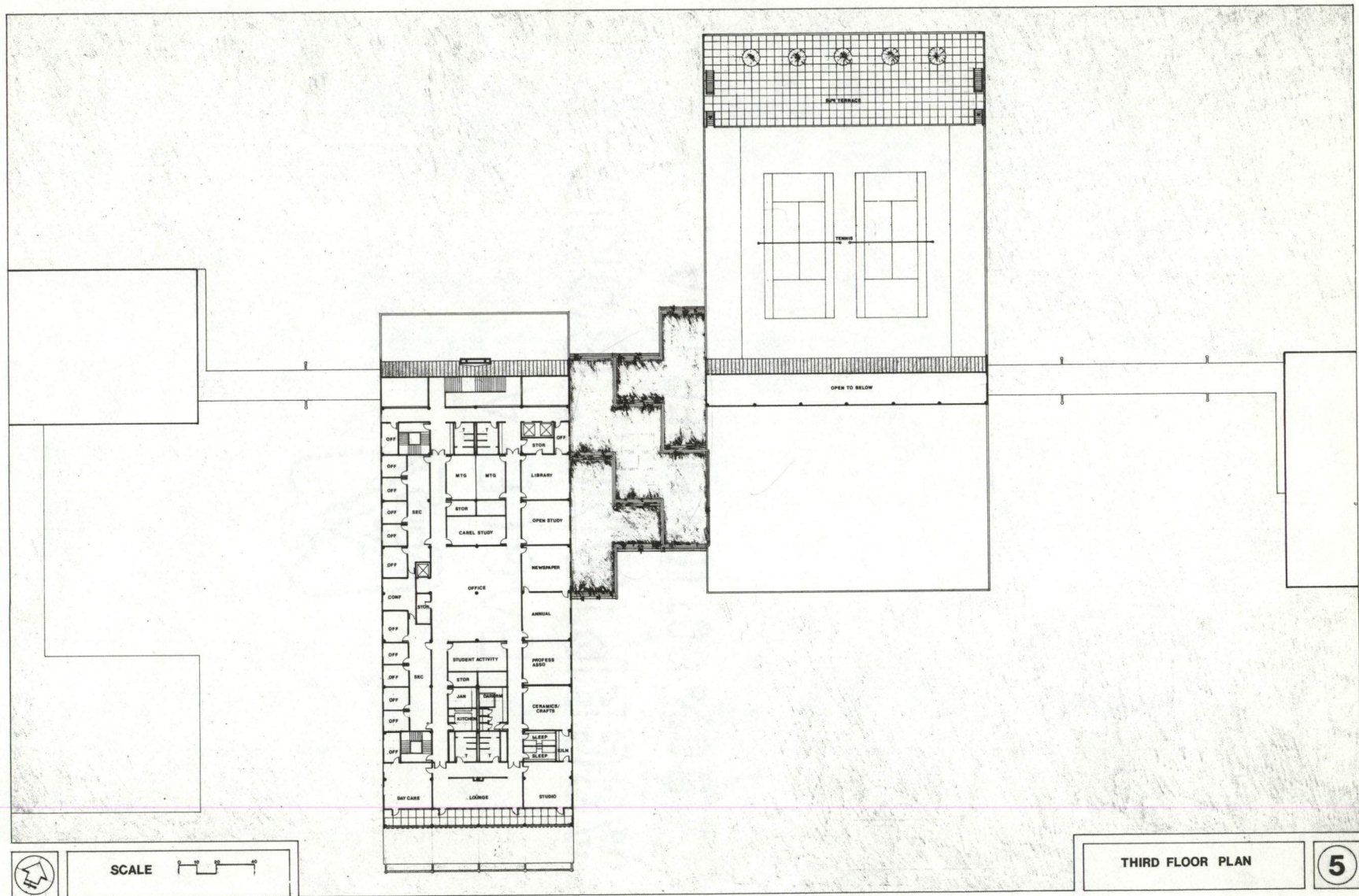
SITE LOCATOR
CHARLESTON, IN SOUTH CAROLINA

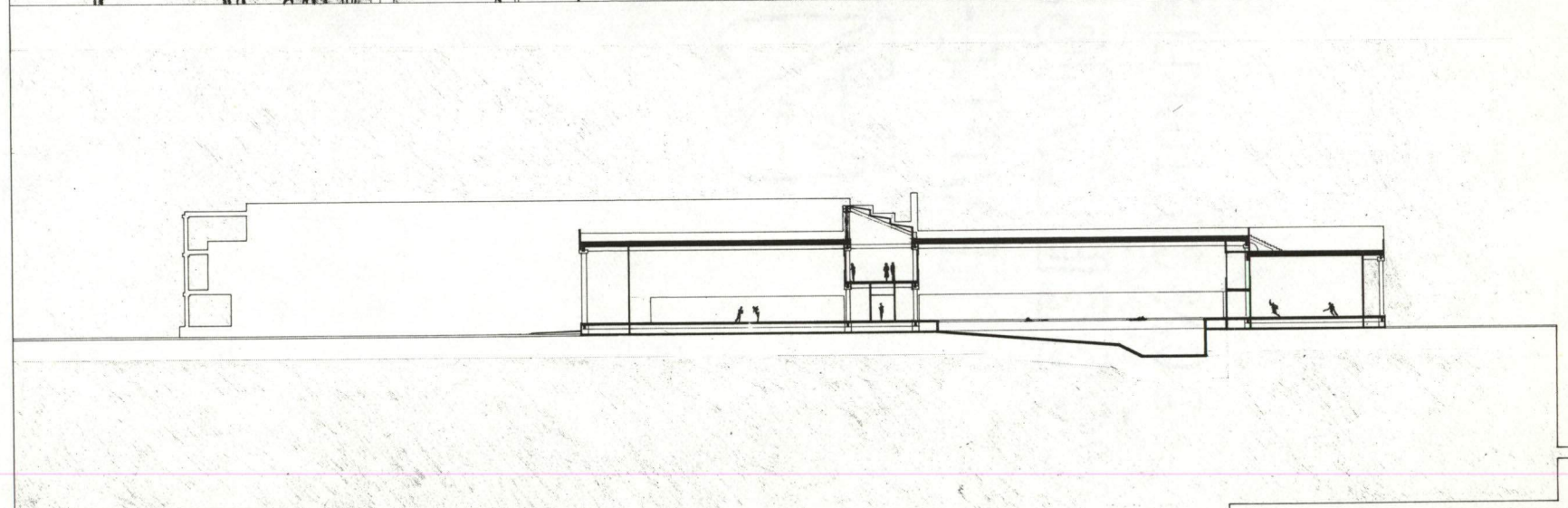
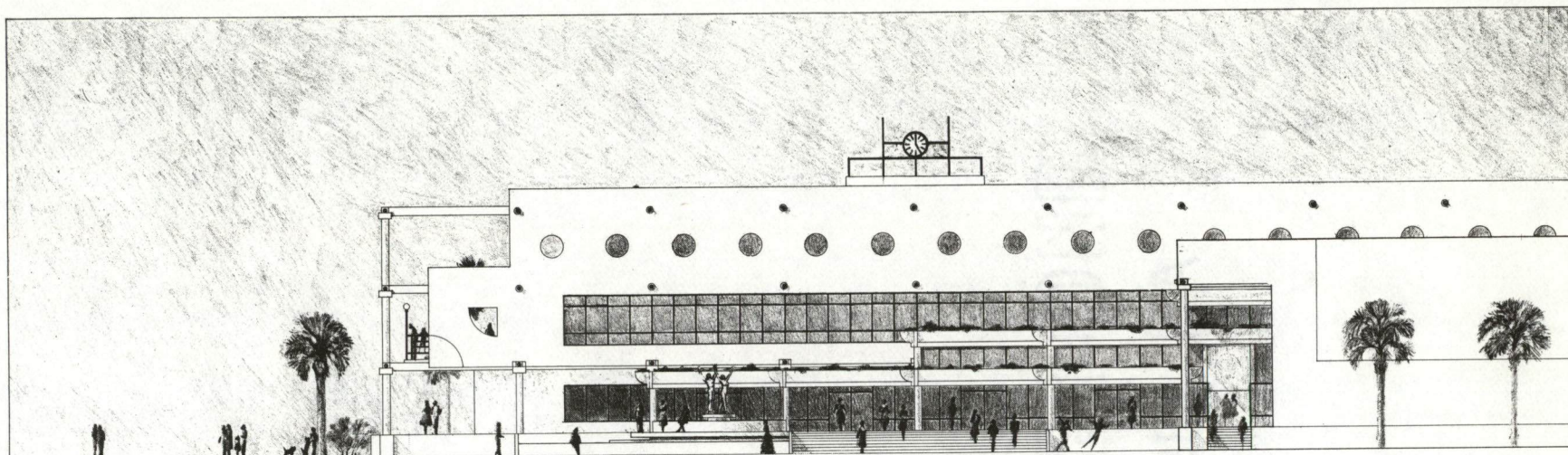
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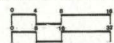


FIRST FLOOR PLAN



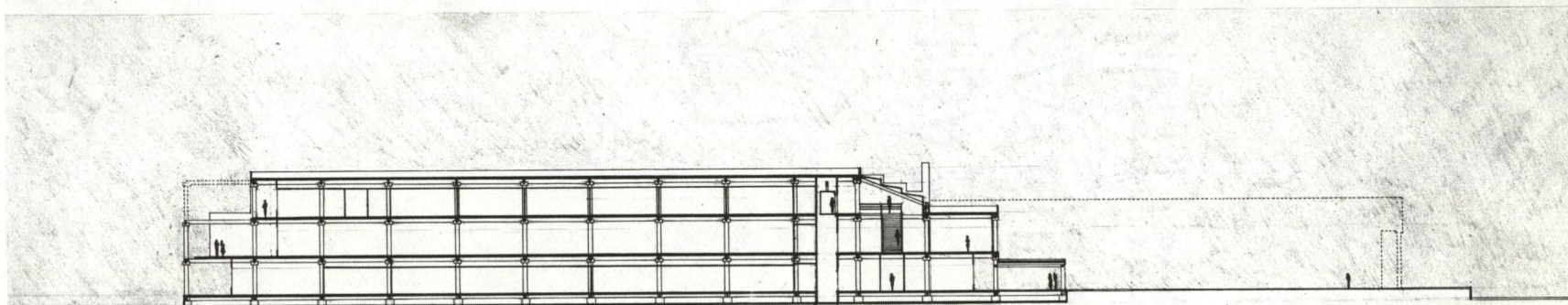
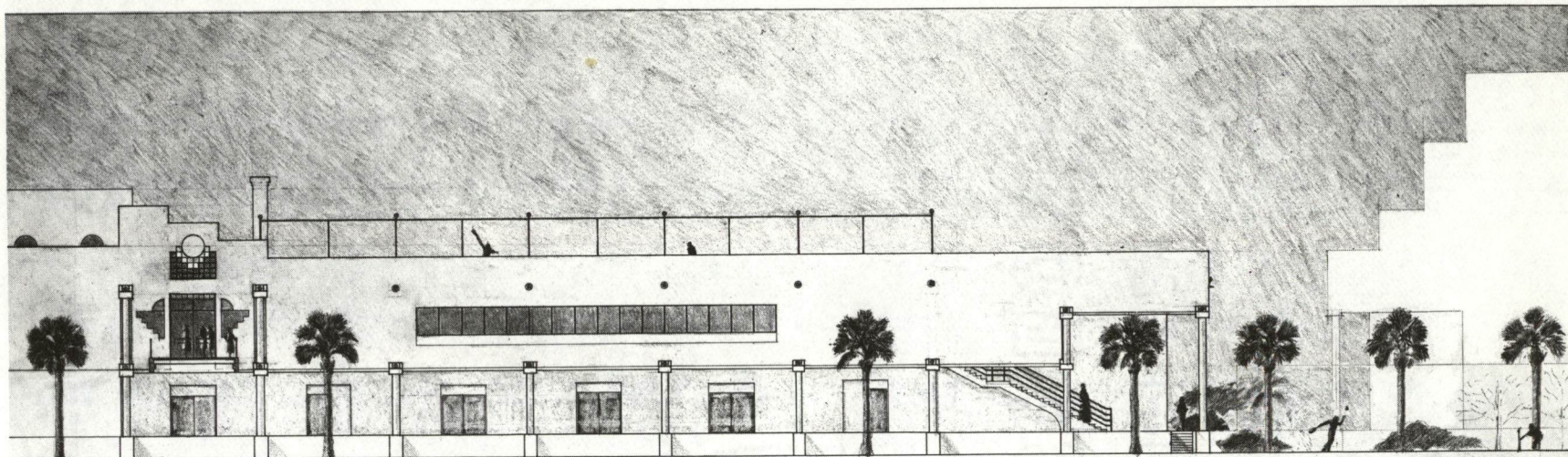


SCALE

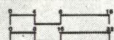


EAST ELEVATION
SECTION B

6

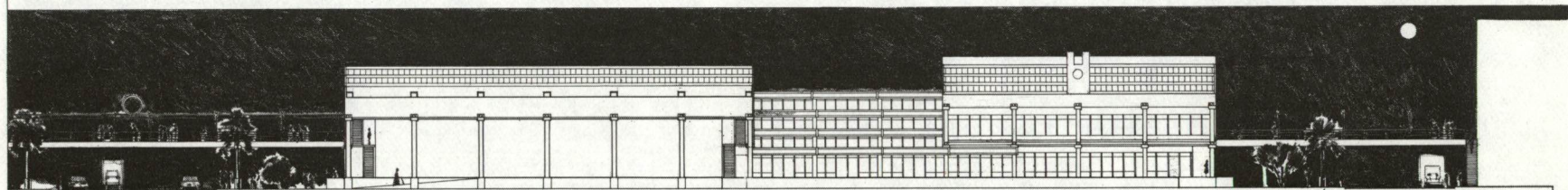
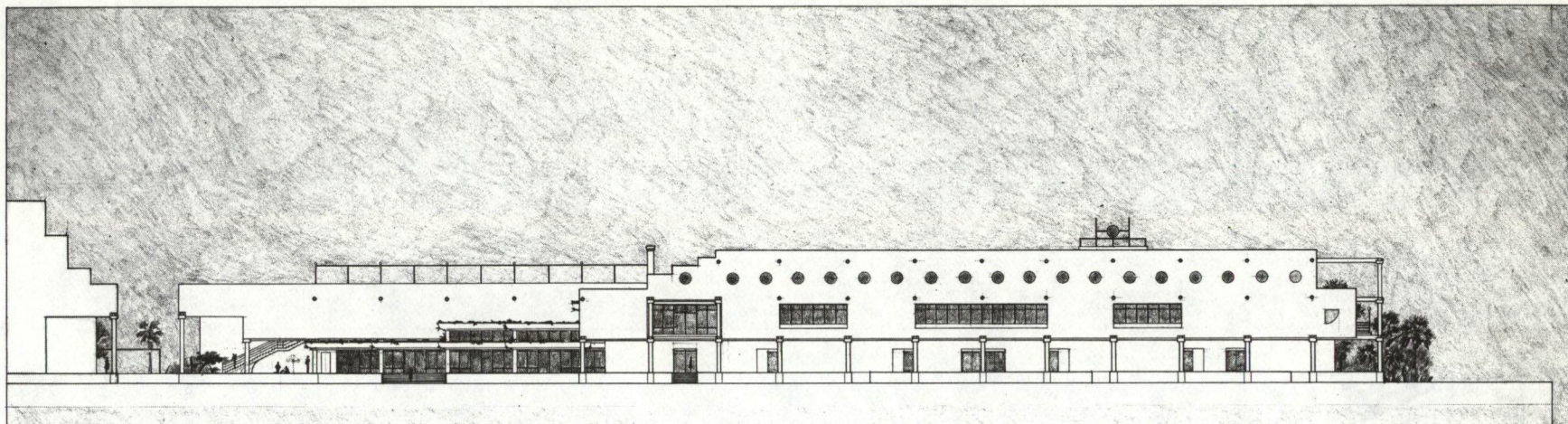


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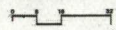


EAST ELEVATION
SECTION C

7

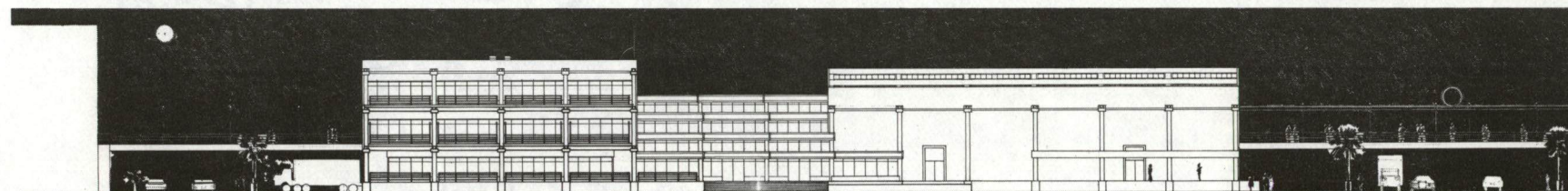
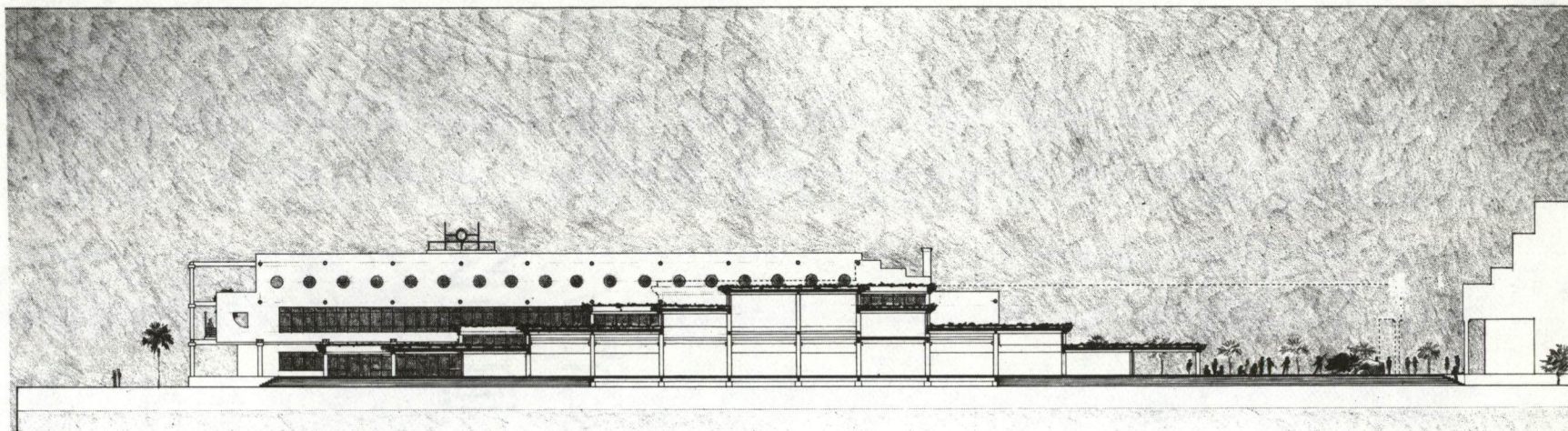


SCALE



WEST ELEVATION
NORTH ELEVATION

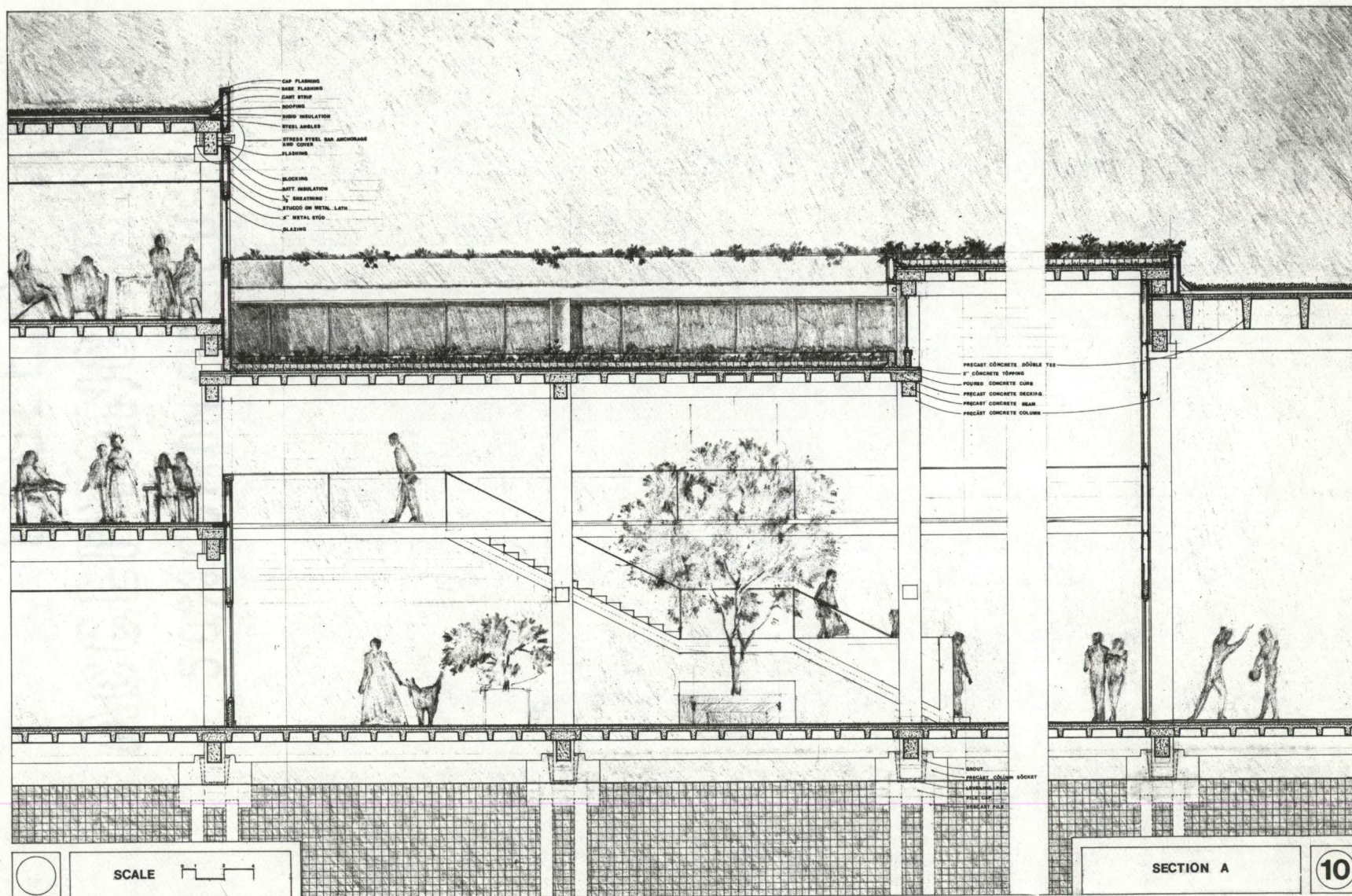
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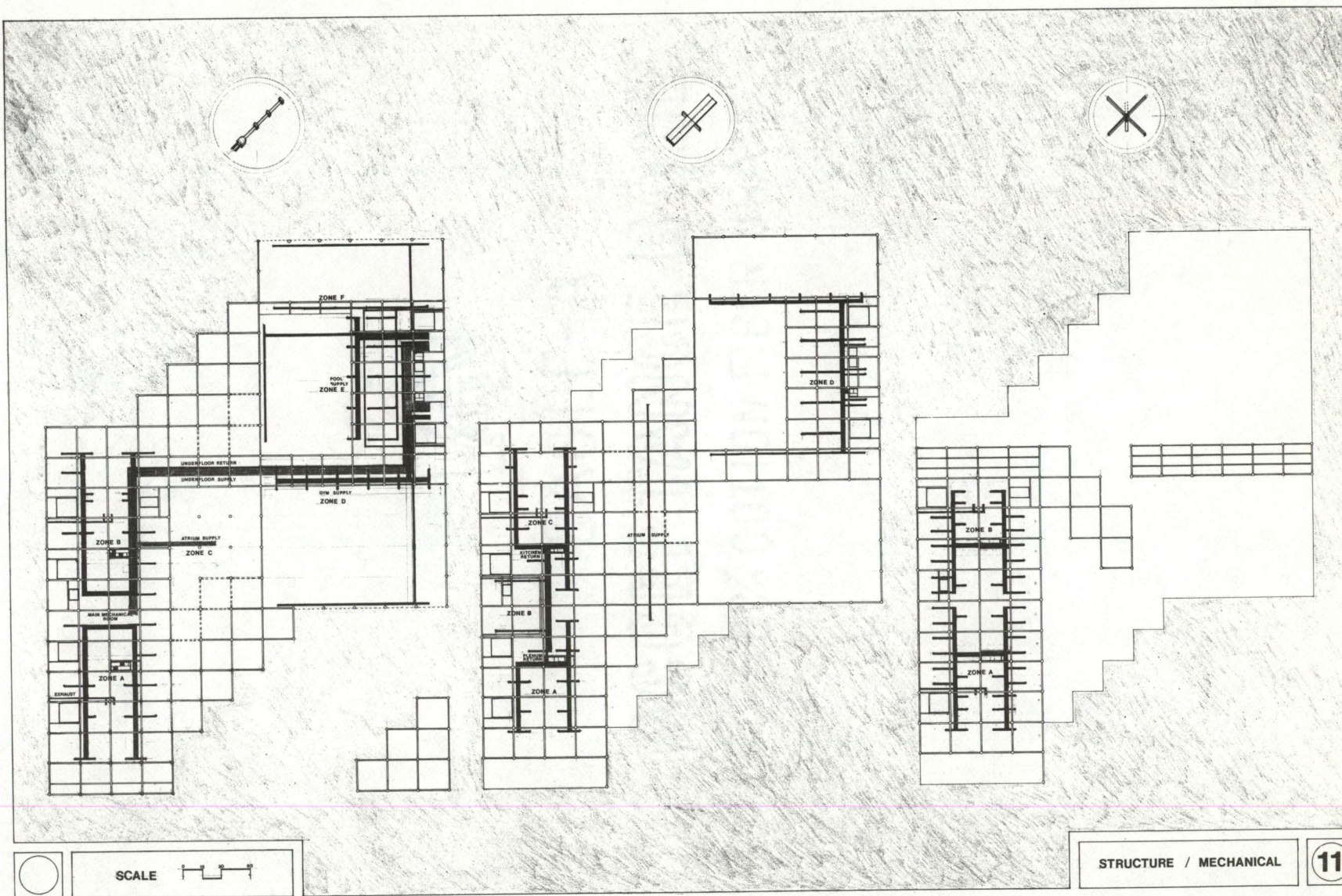


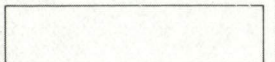
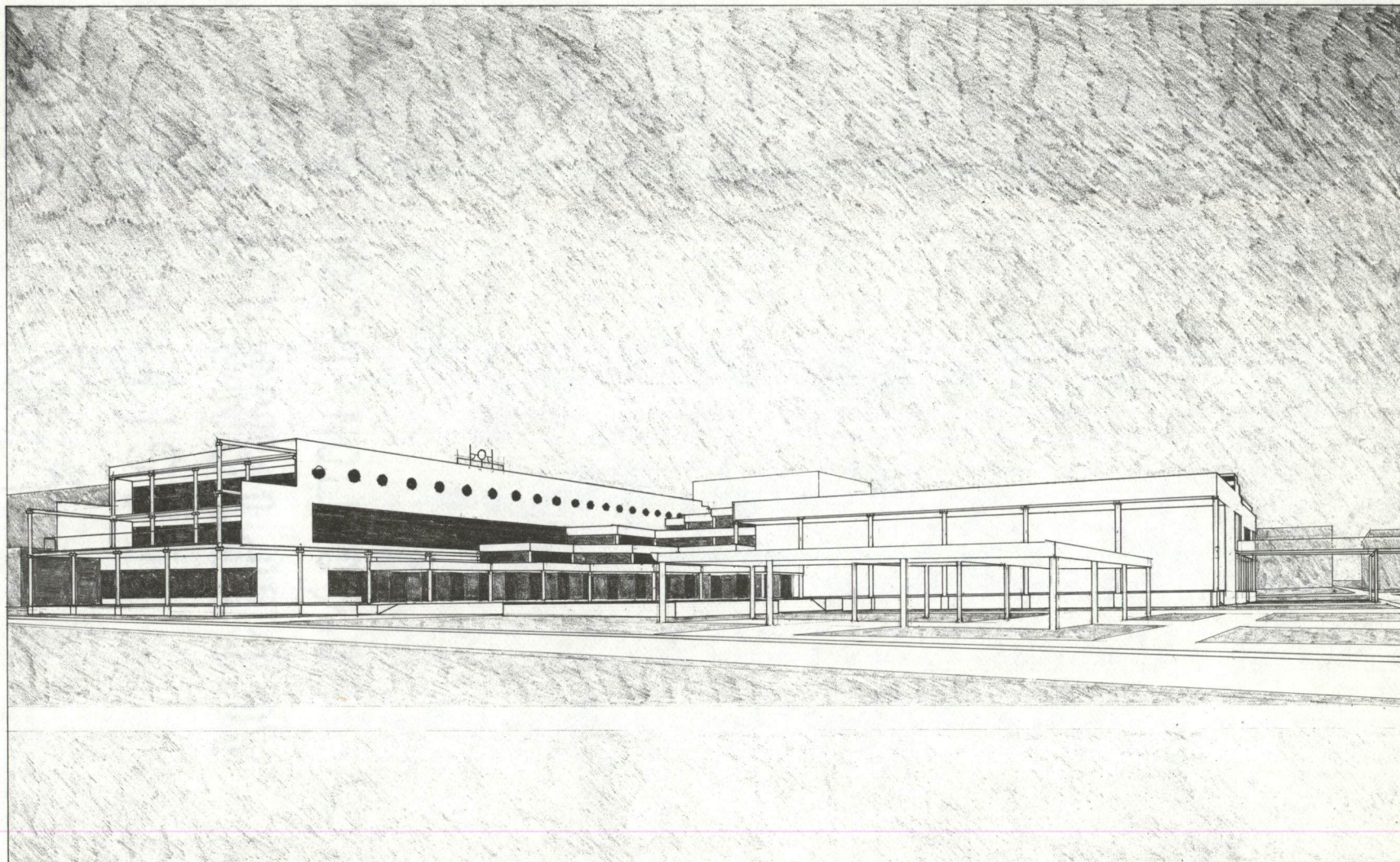
SCALE 1" = 10'

SECTION D
SOUTH ELEVATION

9

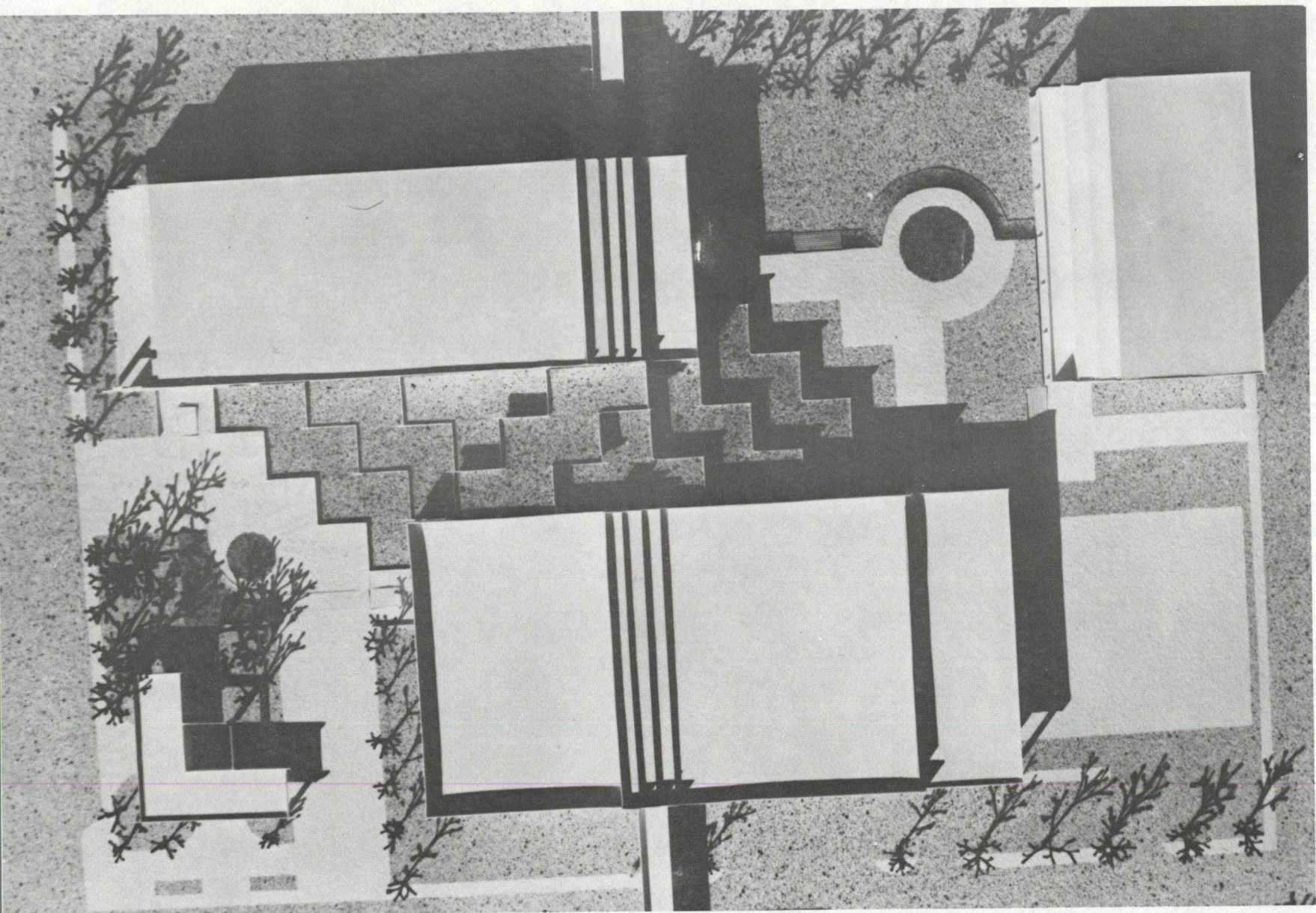


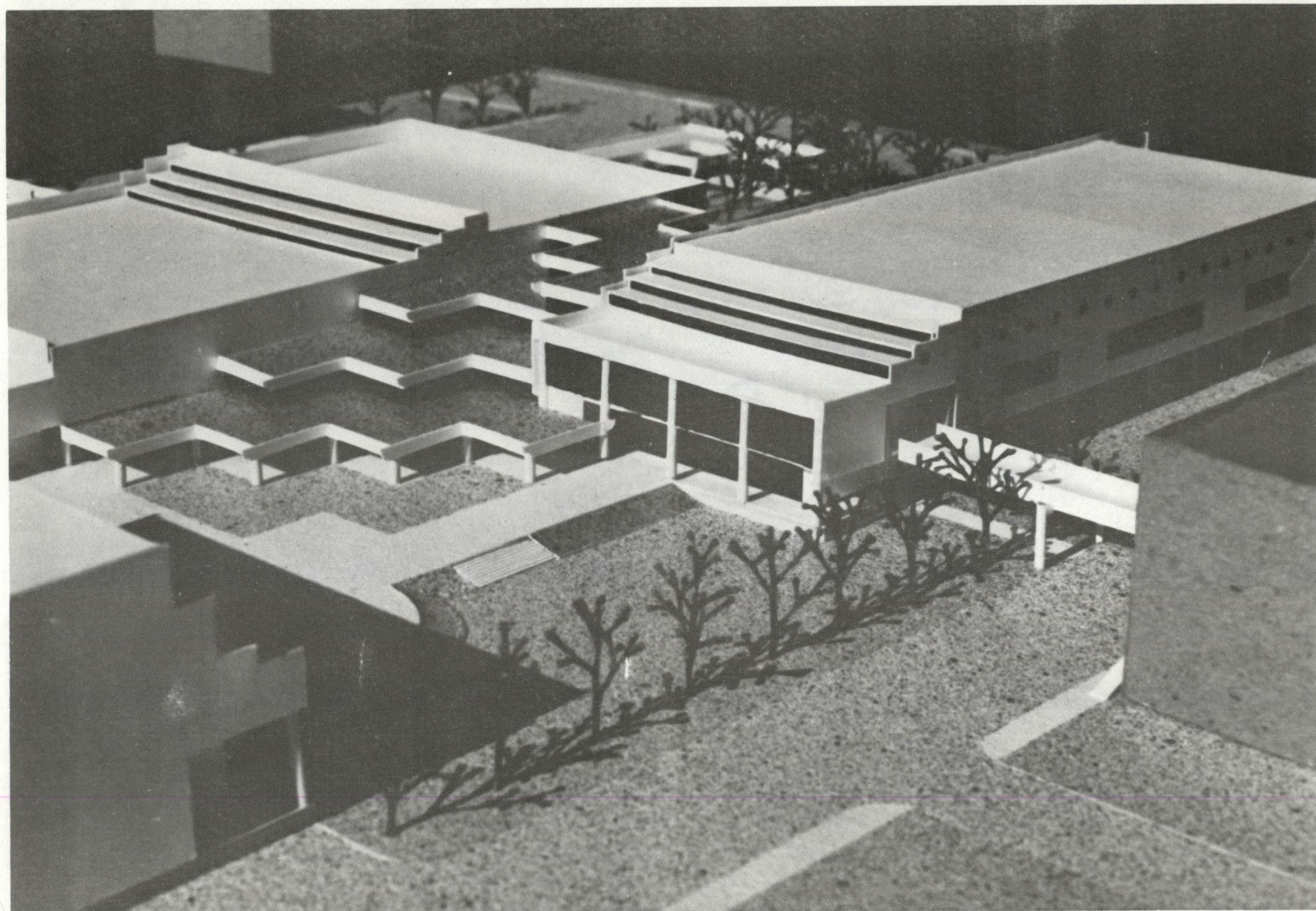


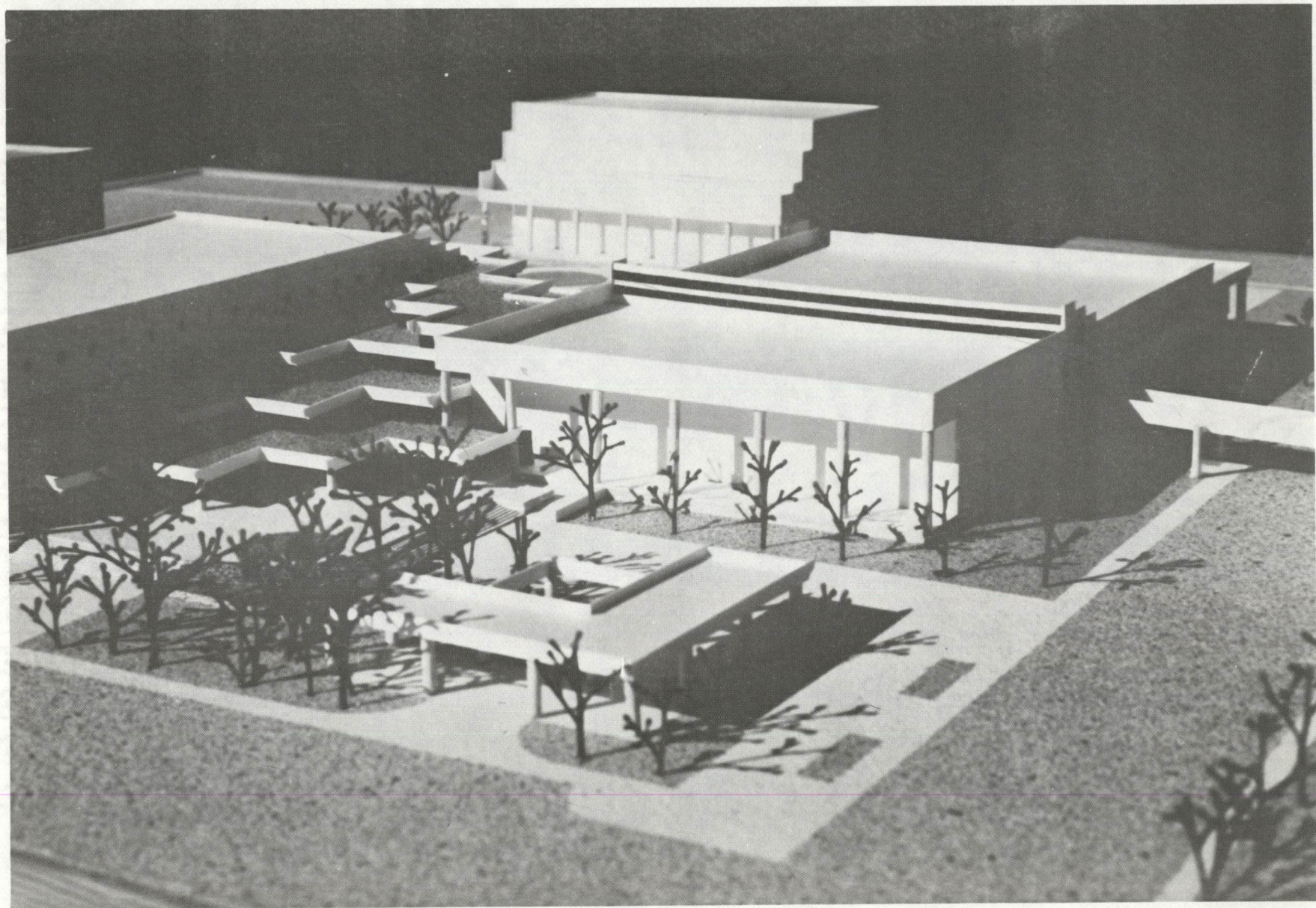


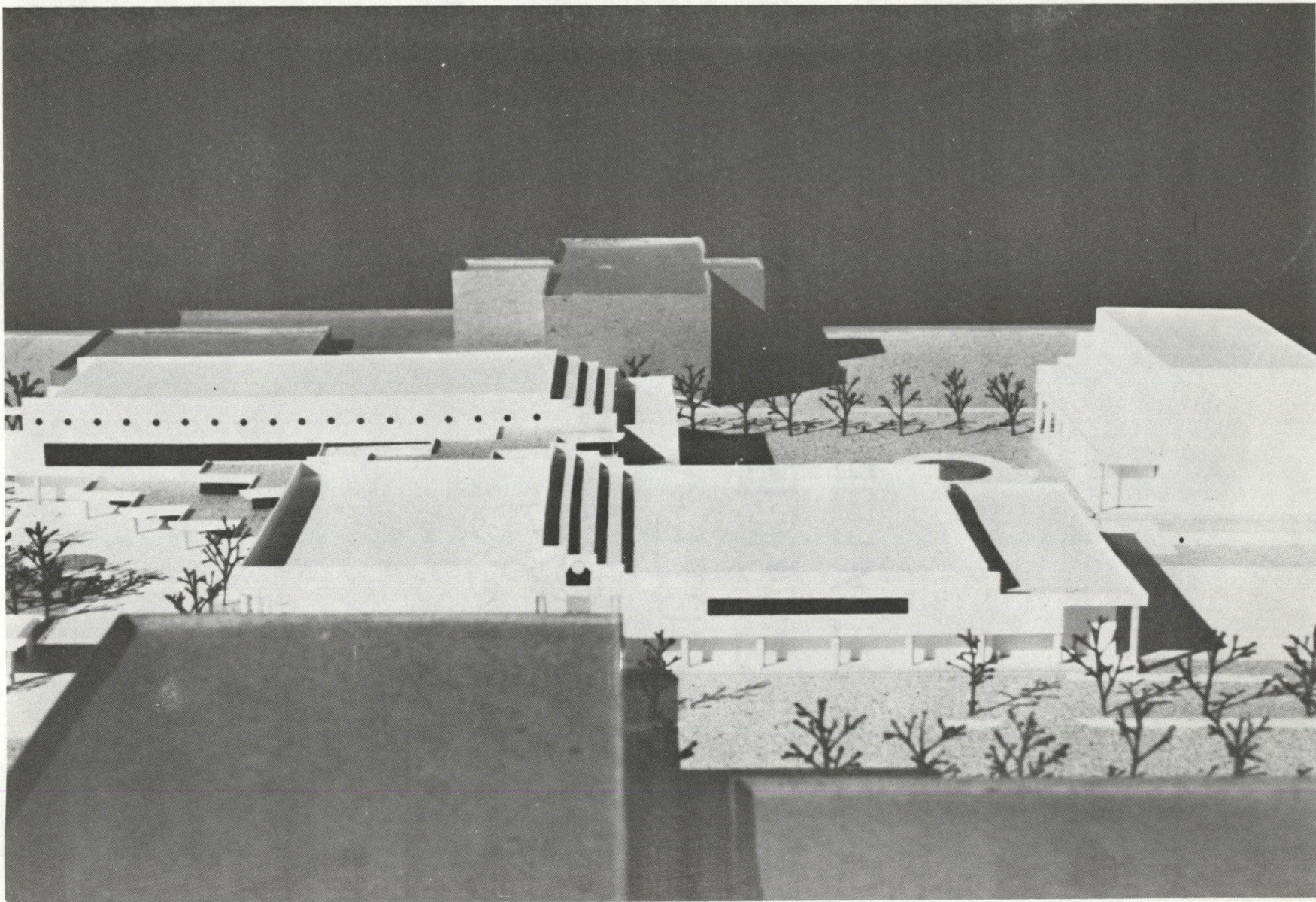
PERSPECTIVE

12









APPENDIX

FOOD SERVICE ANALYSIS

MUSC Personnel Districution at 12 Noon as related to Food Service

Personnel	Number	Now Eating on campus	Projected Users	% Pers. Proj.
Students	2500	2500	2200	90%
Faculty & Execs	641	320	512	80%
Employees	1023	30	511	50%
Special Grps.	25-60	25-60	25-60	100%
Totals	4224	2910	3333	80%

FOOD SERVICE ANALYSIS (cont.)

Present Facilities

There presently exists three facilities for food service: the Coffee Shop and Cafeteria in the Hospital and a cafeteria in the Alumni House. A canteen room in the Library has been recently dismantled. Hospital facilities are being used by 90% of the students. 10% of the students are residents and take their meals at the Alumni House.

Off campus dining facilities within six blocks of the classroom buildings include seven fast food operations and one restaurant. Distance limits the use of these facilities to less than 15% of University personnel. Parking is a problem in the area and the half hour lunch cannot accomodate travel to any of these. Generally, people going after food drive, and have assigned parking spaces at the University to slip back into. These people primarily order take-out.

Program

Food Service

Description: all University personnel, students, faculty and employees need a full service dining room (cafeteria). Buffet service should be accomodated in a private dining room for lunch-meetings and for visiting groups. In addition, a fast-food service is essential for the noon meal. This service would include breakfast, snacks, ice-cream, carry-out and be open for at least 15 hours per day.

Student Cafeteria: to feed 1540 people during two-hour lunch, serving line, 16 people per minute, 320 seats with 5 turnovers of twenty minutes each.

Faculty Cafeteria: feeds 800 people in two hours with 160 seats and five turnovers of twenty minutes.

Buffet Service Cafeteria: feeds 60 people in one hour, 60 seats, one turnover.

Fast Food Service: feeds 1040 people in two hours, 208 seats, serving line with 11 per minute, five turnovers of 18 minutes each. Open from 7 - 10.

STUDENT RESIDENCE FACTORS

Place of Residence (1979)

Downtown	660
Downtown (east)	11
University	274
North Area	140
West Ashley	494
West Islands	152
Summerville	
Goose Creek	
Ladson	
Moncks Corner	
Meggett	95
Mt. Pleasant	135
East Islands	54

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